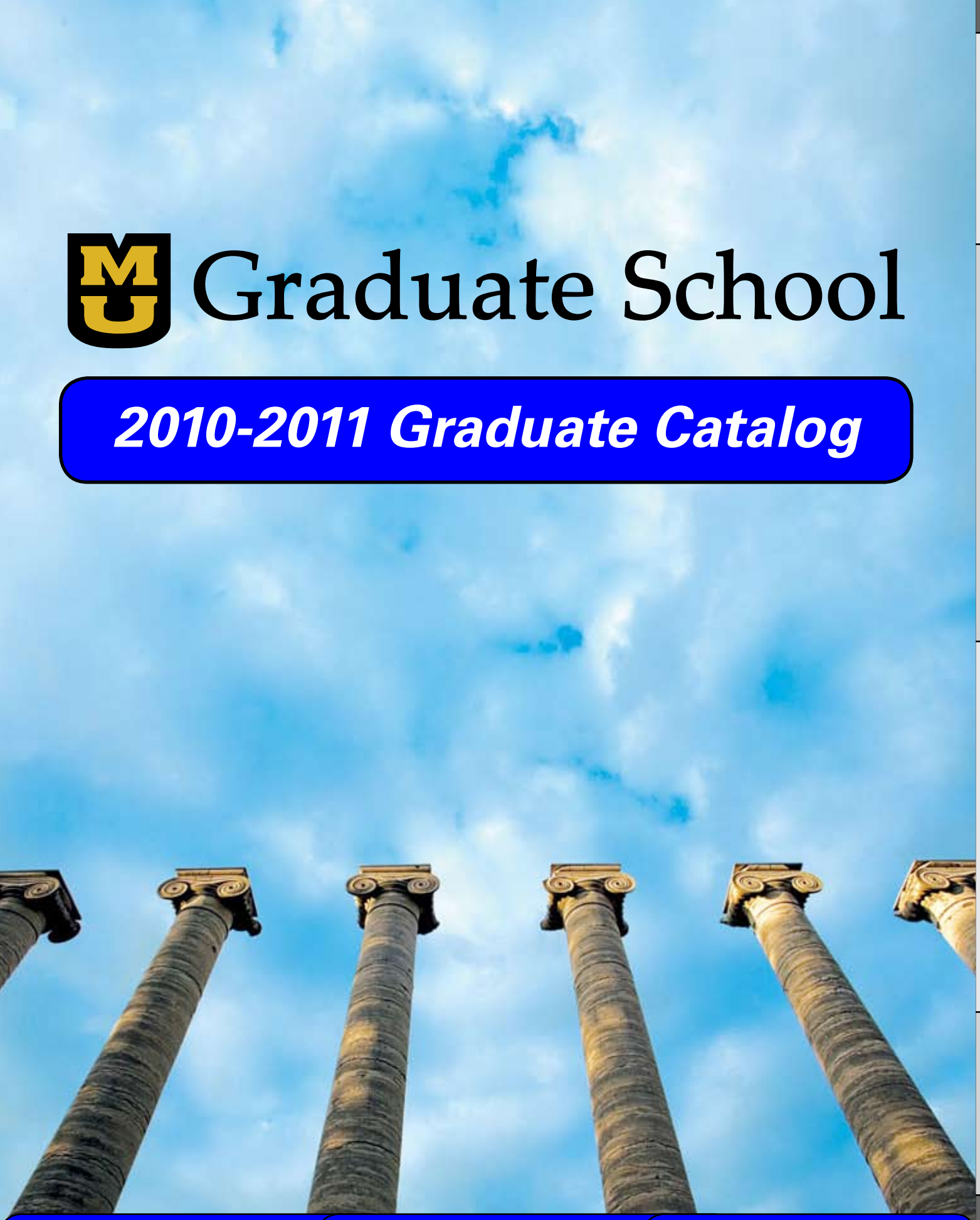

Graduate School

2010-2011 Graduate Catalog

MU Homepage

Graduate Catalog (Web Version)

MU Graduate School Website

Apply Online

Click For The Graduate Programs List

Click For The Catalog Table of Contents

FIRST VISIT HERE? Click For The Catalog PDF User Guide

Table of Conents

Using this table of contents, you can click from here to the item of your choice (on the blue text).

Go back and forth between pages and sections using the left and right arrow buttons at the bottom of each page.

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PART II

User Guide

Introduction

Thank you for using the University of Missouri 2010-2011 Graduate Catalog in this .PDF format. To view properly, please use Adobe Acrobat Reader 7.0 or later.

PDF Document Navigation

Every page has back (◀◀◀) and forward (▶▶▶) buttons. Use these tools to go back and forth between pages within a section.

The black bar with gold lettering on the left side of every page tells you which section you are currently in at all times.

Links to Document PDF Pages and Web Pages

Links to other pages within this PDF Document

Blue text with no line underneath the selected text is an active link to another page within the Graudate Catalog. For example, clicking this text here will take you to the Catalog Table of Contents page within this PDF document.

Links to web pages and sites

Blue text with a line underneath the selected text means the text is an active link that, if you click on it, will take you to a Web page outside the Graduate Catalog PDF document. The tabs at the right are examples of this type of link. The top link will take you to the University of Missouri homepage, while the three remaining tabs link to pages within the Graduate School's Web site.

NOTE: Links to Web sites and Web pages may become broken over time, due to those pages and sites updating and receiving new addresses. All links are current as of August 1, 2010.

NOTE: Error messages may pop-up when you click an active link that takes you outside this PDF document. These are generally caused by the security settings for your computer and browser. You can ignore the pop-up warnings and continue, or seek access to the information through the University of Missouri's Web sites and pages.

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Viewing Document

You can zoom in and out to better view the document. Go to View --> Zoom to select your preferred viewing setting, or use the Zoom Toolbar feature in your internet browser as well. The default setting is "Fit Page".

Printing Pages

We encourage you to not print pages in order to help save supplies. If you do print pages from this catalog, please only select the pages you want, and not the entire document. Select "Print Range" and enter the page range you want to print. Also, select "Fit to Printable Area" under Page Scaling options, so that no information will be cut off by the printer.

End of Section Designation

The last page of each section or program description will be designated by two items; a notice in CAPS, as seen below, and also a lack of a "*continued on next page*" notice in the lower right corner, as seen on the previous page.

END OF USER GUIDE SECTION

University of Missouri Leadership

University of Missouri Board of Curators

David R. Bradley, St. Joseph
John M. Carnahan III, Springfield
Don M. Downing, Webster Groves
Warren K. Erdman, Kansas City, Board Vice Chairman
Bo Fraser, Columbia, Past-Chairman
Wayne Goode, St. Louis
Judith G. Haggard, Kennett, Board Chairwoman
Doug Russell, Lebanon
David G. Wasinger, St. Louis
Laura Confer, Missouri University of Science and Technology, Student Representative

University of Missouri System (UM)

http://www.umsystem.edu

Gary D. Forsee, UM president

Gary K. Allen, UM vice president for Information Technology and MU chief information officer
Steven Graham, senior associate vice president for Academic Affairs
Steven C. Knorr, vice president for Government Relations
Natalie "Nikki" Krawitz, vice president for Finance and Administration
Michael F. Nichols, vice president for Research and Economic Development
Cindy Pollard, associate vice president for Strategic Communications
Elizabeth "Betsy" Rodriguez, vice president for Human Resources
Kathy Miller, interim chief of staff
Cindy S. Harmon, secretary to the Board of Curators
Stephen J. Owens, general counsel

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University of Missouri (MU)

Columbia, Missouri
http://www.missouri.edu

Brady J. Deaton, chancellor

Chancellor's Staff:

Michael F. Alden, director, Intercollegiate Athletics
Brian L. Foster, provost
David P Housh, vice chancellor, Development and Alumni Relations
Jacquelyn "Jackie" Jones, vice chancellor, Administrative Services
Christine H. Koukola, assistant to the chancellor, University Affairs
Todd A. McCubbin, assistant vice chancellor, Alumni Relations
Michael Middleton, deputy chancellor
Tim R. Rooney, director, Budget and Academic Budget
Catherine C. Scroggs, vice chancellor, Student Affairs
Harold "Hal" A. Williamson, MD, vice chancellor, Health System

Brian L. Foster, Provost

Provost's Staff:

Jacquelyn "Jackie" Jones, vice chancellor for Administrative Services
Tim R. Rooney, director of Budget and Academic Budget
Terry L. Barnes, assistant to the provost for Community College Partnerships
Kenneth D. Dean, deputy provost
Steve Wyatt, vice provost for Economic Development
Ann J. Korschgen, vice provost for Enrollment Management
George L. Justice, vice provost for advanced studies and dean of the Graduate School
Gary K. Allen, UM vice president for Information Technology and MU chief information officer
Handy Williamson, vice provost for International Programs
Mardy T. Eimers, director, Institutional Research
Pat Morton, planning assistant, Office of the Provost
Annette Sobel, assistant to the provost for strategic opportunities
Robert V. Duncan, vice chancellor for research
Catherine Scroggs, vice chancellor for student affairs
James N. Spain, vice provost for undergraduate studies
Michael Ouart, vice provost and director of University of Missouri Extension

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Deans and Directors

Thomas L. Payne, vice chancellor and dean, College of Agriculture, Food and Natural Resources
Mark R. Ryan, director, School of Natural Resources
Michael J. O'Brien, dean, College of Arts and Science
Robert S. Shay, director, School of Music
Joan Gabel, dean, Robert J. Trulaske, Sr. College of Business
Vairam Arunachalam, director, School of Accountancy
Daniel Clay, dean, College of Education
John Wedman, director, School of Information Science and Learning Technologies
James E. Thompson, dean, College of Engineering
George L. Justice, vice provost for advanced studies and dean of the Graduate School
Barton J. Wechsler, director, Harry S Truman School of Public Affairs
Richard E. Oliver, dean, School of Health Professions
Stephen R. Jorgensen, dean, College of Human Environmental Sciences
Marjorie R. Sable, director, School of Social Work
R. Dean Mills, dean, School of Journalism
R. Lawrence Dessem, dean, School of Law
Robert Churchill, dean, School of Medicine
Judith Fitzgerald Miller, dean, School of Nursing
Neil C. Olson, dean, College of Veterinary Medicine
James A. Cogswell, director, Libraries

MU Graduate School

George L. Justice, vice provost for advanced studies and dean of the Graduate School

Teresa Cooney, associate professor of Human Development & Family Studies, and Graduate School faculty fellow
Lee Wilkins, professor of Journalism, and Graduate School faculty fellow

Harry S Truman School of Public Affairs
Master of Public Health
MU Informatics Institute
Nuclear Science and Engineering Institute

END OF LEADERSHIP LIST

University of Missouri Graduate Catalog 2010-2011

This document available electronically at
http://gradschool.missouri.edu/programs/catalog/

Notifications In This Section

Accreditation

The University of Missouri is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools. The University of Missouri is a member of the Association of American Universities, an association of 63 leading research universities in the United States and Canada. Various schools, colleges and departments are also accredited by their respective professional associations and accrediting agencies.

MU's Notice of Nondiscrimination

The University of Missouri does not discriminate on the basis of race, color, religion, sex, sexual orientation, national origin, age, disability, or status as a Vietnam era veteran. Any person having inquiries concerning the University of Missouri's compliance with implementing Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, or other civil rights laws should contact the Assistant Vice Chancellor, Human Resource Services, University of Missouri, 130 Heinkel Building, Columbia, MO 65211, (573) 882-4256, or the Assistant Secretary for Civil Rights, US Department of Education.

Accommodations for Students with Disabilities

The University of Missouri complies with the Americans with Disabilities Act and other applicable laws and regulations. If you have

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a disability and need accommodations, please contact Disability Services, S5 Memorial Union, Voice (573) 882-4696, TTY (573) 882-8054, or email disabilityservices@missouri.edu as soon as possible so that appropriate arrangements can be made. For more information, please visit the Web site at http:// disabilityservices.missouri.edu. If you need this information in an alternative format (Braille, large print, or digital format), Disability Services can provide assistance.

Family Education Rights and Privacy Act (FERPA)
The University of Missouri policies and procedures adhere to this federal law passed in 1974. It is sometimes still referred to as the Buckley Amendment. In accordance with the law, students have the right to restrict the release of directory information. Directory information for MU is defined as: a student's name, address, telephone listing, e-mail address, major field of study, student level, participation in officially recognized activities and sports, dates of attendance, degrees and awards received, participation in officially recognized sports, enrollment status in any past and present semester (i.e. full/part-time), and the most recent previous educational agency or institution attended by the student. Students may prohibit the University from releasing this information without their consent. To request this restriction, students may contact the Office of the University Registrar-Registration, 130 Jesse Hall, or may print and complete the restriction form available on the University Registrar's web site.

Note: The University does not release grades to parents unless the student specifically authorizes it in writing in the Office of the University Registrar or a parent shows proof that the student is a dependent as defined in Section 152 of the Internal Revenue Code of 1954. "Parent" means a parent of a student and includes a natural parent, a guardian, or an individual acting as a parent in the absence of a parent or guardian.

Equity in Athletics Disclosure Act
The University of Missouri complies with the Equity in Athletics Disclosure Act of 1994, Section 360B of Pub.L. 103-382. This act and accompanying federal regulations require that certain information with regard to intercollegiate athletics, including operating expenses, revenue, salaries and participation rates, be made available to current and prospective students and the public. This report is available from the Department of Intercollegiate Athletics at (573) 882-6501.

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University of Missouri 2010-2011 Catalog is not an Offer of Contract

All statements in this publication are announcements of present policies only and are subject to change without notice. They are not to be regarded as offers to contract.

Note on Policy Changes and Catalog Updates

The *archived* version (PDF) of the catalog is a static document. Therefore, policy and procedure changes enacted during the 2010-2011 academic year will be recorded on the web version of the catalog. The PDF catalog is updated and archived annually.

2010-2011 University of Missouri Graduate School Catalog

Robin G. Walker, PhD, Coordinator
Mike Zweifel, Designer
Qi Qi, Graduate Research Assistant for Communications

This catalog was archived August 1, 2010.

END OF OFFICIAL NOTIFICATIONS SECTION

Dean's Letter

As Vice Provost for Advanced Studies and Dean of the Graduate School, I am constantly amazed by the brilliance, hard work, and enthusiasm of the University of Missouri's graduate students. Time and again, these future practitioners, scientists, researchers and teachers have told me how they are eager to become engaged citizens and contribute their many talents to the benefit of our society.

The Graduate School holds the campus-wide responsibility to promote, facilitate, and support graduate education, scholarship, and creative achievement. Our 95 graduate programs work in concert with undergraduate instruction, providing support for MU's mission of teaching, research, outreach, and economic development. Across schools and colleges, MU faculty and staff share the values of

- unparalleled graduate teaching, advising, and mentoring;
- students' mastery of content and other degree requirements; and
- students' professional development and successful career placement.

In part, many students come to MU because of the highly collaborative, interdisciplinary nature of our programs. They know they will have access to some of the finest collegiate research facilities in the nation. Still others enroll with the confidence that they will enter the workforce with current disciplinary knowledge, problem solving abilities, and state-of-the-art technical skills.

MU graduates will be our next generation of business, government, creative, and educational leaders; their contributions will be vital to sustain our dynamic and increasingly global society. Learn more about their research, teaching and service achievements under the "About Us" tab of the Graduate School Web site: http://gradschool.missouri.edu

Thank you for your interest and support of the MU Graduate School. Please don't hesitate to contact us with questions, suggestions or ideas. The next time you visit MU, please stop by 210 Jesse Hall. We would be very happy to see you!

Sincerely,
George L. Justice
Vice Provost for Advanced Studies and Dean of the Graduate School
University of Missouri

About the University of Missouri

The University of Missouri (MU), established in 1839, is the oldest state university west of the Mississippi River, and it is an original land grant institution. Located in Columbia, MU is the largest of the four campuses of the University of Missouri System. Other campuses are in St. Louis, Kansas City and Rolla.

Our distinct mission is to provide all Missourians the benefits of a world-class research university. We are stewards and builders of a priceless state resource, a unique physical infrastructure and scholarly environment in which our tightly interlocked missions of teaching, research and service work together on behalf of all citizens. Students work side by side with some of the world's best faculty to advance the arts, the humanities, the sciences, and the professions. Scholarship and teaching are daily driven by a sense of public service—the obligation to produce and disseminate knowledge that will improve the quality of life in the state, the nation and the world. http://www.missouri.edu/about/mission.php

MU is one of only 35 public U.S. universities, and the only public institution in Missouri, to be selected for membership in the Association of American Universities. MU is designated as "comprehensive doctoral with medical/veterinary" and "very high research activity" by the Carnegie Foundation for the Advancement of Teaching and is a member of the Association of Public and Land-Grant Universities. MU is one of only six public universities in the country with medicine, veterinary medicine, law, engineering and agriculture all on one campus. Thus, graduate students find many rich opportunities for collaborative research and scholarship within and across disciplines.

MU's schools and colleges (links to Web sites):

College of Agriculture, Food and Natural Resources
- School of Natural Resources

College of Arts and Science
- School of Music

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Robert J. Trulaske, Sr. College of Business
School of Accountancy
College of Education
School of Information Science and Learning Technologies
College of Engineering
Graduate School
Harry S Truman School of Public Affairs
School of Health Professions
College of Human Environmental Sciences
School of Social Work
School of Journalism
School of Law
School of Medicine
Sinclair School of Nursing
College of Veterinary Medicine

2010-2011 Provost's Academic Calendar (web link)
Please check with your department of interest to obtain deadlines for application, enrollment, etc.

It is the policy of the University of Missouri to respect the diversity of our students. The faculty is reminded that students might want to observe religious holidays and days of special commemoration and is encouraged to accommodate students who have a conflict with a class period, test or activity because of these obligations.

The MU Calendar of Events is at http://calendar.missouri.edu.

The Graduate School Calendar of Events is at http://gradschool.missouri.edu/calendar/.

Approved by the MU Faculty Council on November 3, 2005.

END OF UNIVERSITY DESCRIPTION AND ACADEMIC CALENDAR AREA

About the MU Graduate School

The Graduate School at University of Missouri (MU) administers one of the most comprehensive set of programs in the United States: 65 doctoral and 95 master's programs across a wide range of disciplines including science, technology, engineering and mathematics (STEM) fields; the social sciences; business and education; and the humanities and arts. The broad scope of MU degree programs promotes interdisciplinary research, scholarship, and dialogue among scholars from diverse disciplinary backgrounds.

For Fall Semester 2009, MU enrolled 6,294 graduate students, coming from every state in the U.S. and 93 foreign countries. This includes 1,134 international graduate students, with China (367), India (194) and the Republic of Korea (119) having the largest contingents of international graduate students attending the University of Missouri.

An additional 1,151 students were enrolled in a professional degree program in Fall Semester 2009. A total of 7,445 students, or approximately 24% of the MU total student population, was enrolled in a graduate or professional degree program.

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Beyond its administrative functions and support of graduate programs across campus, the MU Graduate School is also an academic unit, offering several graduate courses and a certificate program. Providing oversight and leadership are the graduate dean and two associate deans, who work with staff members to provide a range of services and programs. Initiatives, such as the national PhD Completion Project, Responsible Conduct of Research, and Preparing Future Faculty, also fall under its purview. The associate deans also serve as liaisons with Graduate Faculty Senate, the Postdoctoral Association, and several graduate student groups. The schema in this section (click here) helps to depict the Graduate School's many functions.

In 1846, MU granted its first master's degree, and the first doctoral degree followed 53 years later (1899). In Academic Year 2008, MU conferred 326 PhD degrees; 1,420 master's degrees; 303 first professional degrees; 69 graduate certificates and 34 educational specialist degrees. Today, MU has more than 22,000 graduate alumni in Missouri alone!

MU graduate education is ultimately aimed at meeting the future needs of our society—familial, social, economic and environmental. Degree programs prepare students to become educators, government leaders, scientists, business managers, engineers, psychologists, entrepreneurs and social workers. Importantly, while students learn how to solve complex problems and advance knowledge, they also prepare to become engaged citizens.

MU graduate students have access to some of the finest research facilities in the nation: In addition to being the home of the oldest agricultural experiment station west of the Mississippi River, Sanborn Field (pictured), MU supports eight core research facilities, a nuclear reactor, research farms and several interdisciplinary research centers. Faculty in journalism, business, engineering, chemistry, education, health professions, public affairs, law and human environmental studies also offer research centers where graduate students may study and conduct research. Across disciplines, mentoring is a strong component of MU's graduate education.

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Ellis Library on the MU campus

Also supporting graduate study is the MU library system, which includes more than 3 million volumes, almost 7 million microforms, 1.6 million government documents and more than 33,000 journal subscriptions. The main library houses special collections, as do several museums. The rich array of resources spans disciplines and helps serve the research needs of graduate students all across campus.

The MU Graduate School is a member of the Association of Graduate Schools and the Council of Graduate Schools.

END OF GRADUATE SCHOOL DESCRIPTION

University of Missouri Graduate School

Dr. George Justice
Vice Provost for Advanced Studies
and Dean of the Graduate School

Dr. Teresa Cooney
Faculty Fellow,
MU Graduate School

Dr. Lee Wilkins
Faculty Fellow,
MU Graduate School

Serving the MU Campus and the State of Missouri through:

Administrative Support Services
- Recruitment
- Admissions
- Advising
- Support for MU Postdoctoral Association
- Grad Student Support Program + Insurance
- Graduate Faculty Senate

Initiatives
- EMERGE Fall Preview Weekend
- Glimpse into Graduate School program
- Graduate Education Week
- Graduate School *Matters* series
- Ronald E. McNair Scholars Program
- PhD Completion Project
- Amazing Graduate Students series

Professional Development
- Preparing Future Faculty
- Graduate School Career Services
- Support for graduate student groups
- International Teaching Assistant Program
- Blackboard Site on Grantsmanship

Academic Programs
- Master of Public Health
- MU Informatics Institute
- Nuclear Science and Engineering Institute
- Truman School of Public Affairs
- Minor in College Teaching
- Dean's Certificate in Responsible Conduct of Research

MU Graduate Degrees Available 2010-2011

The following official degrees are available to students who enroll during the 2010-2011 academic year. This list does not include degrees available prior to 2009, although departments may still have active students who were admitted into those degree programs. Please refer to the degree program descriptions for additional degree options, emphasis areas, focus areas, dean's certificates and dual degrees. Students should note that online degrees, designated graduate minors and graduate certificates are listed separately. Only official emphasis areas, designated minors and graduate certificates appearing on MU transcripts are included on this list.

Key to MU Graduate and Professional Degrees

Dual master's degrees – in select cooperating programs, two master's degrees may be pursued simultaneously, with some coursework in common. The student must be eligible and admitted into both degree programs.

Joint graduate/professional degrees – in select cooperating programs, a graduate student may concurrently pursue course work in a professional school (e.g., law, vet med, medicine). Examples include the MD/PhD and MS/JD. The student must be eligible and admitted into both degree programs.

DVM – Doctor of Veterinary Medicine. In some programs, the DVM may be offered as a dual degree.

EdD – Doctor of Education

EdSp – Education Specialist

JD – Juris Doctor or Doctor of Jurisprudence (law). In some programs, the JD may be offered as a dual degree.

LL.M – Master of Laws

MA – Master of Arts

MD - Medical Doctorate. In some programs, the MD may be offered as a dual degree.

MEd – Master of Education

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MS - Master of Science

M (any other combination). The first "M" indicates a master's degree. The letter(s) following the M represent a discipline or degree area. For example, M Acc is Master of Accountancy.

PhD – Doctor of Philosophy

post - means following. For example, post-master's indicates that a student must first earn a master's degree.

A
Accountancy (M Acc, PhD)
Agricultural Economics (MS, PhD)
Agricultural Education (MS, PhD)
Animal Science (MS, PhD)
Anthropology (MA, PhD)
Architectural Studies (MA, MS)
Architectural Studies degrees online - see MU Direct
Art (MFA)
Art History & Archaeology (MA, PhD)
Astronomy - see Physics and Astronomy

B
Biochemistry (MS, PhD, dual PhD/MD)
Biological Engineering (ME, MS, PhD)
Bioinformatics (MS) - see Health Informatics
Biological Sciences (MS, PhD)
Biomedical Sciences
- Emphasis Area: Biomedical Sciences (MS, PhD, dual MS/DVM)
- Emphasis Area: Comparative Medicine (MS)
- Emphasis Area: Veterinary Medicine and Surgery (MS)
- Emphasis Area: Pathobiology (MS)

Biostatistics (MA) - see Statistics
Business Administration (MBA, PhD, dual degrees)
- Finance
- Management
- Marketing

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C
Chemical Engineering (MS, PhD)
Chemistry (MS, PhD)
Civil and Environmental Engineering (MS, PhD)
Classical Languages (MA) – see Classical Studies
Classical Studies (MA, PhD)
Communication (MA, PhD)
Communication Science and Disorders (MHS, PhD)
Comparative Medicine – see Biomedical Sciences MS degree with Emphasis Areas
Computer Engineering (MS, PhD) – see Electrical & Computer Engineering
Computer Science (MS, PhD)

D
Diagnostic Medical Ultrasound (MHS)
Dispute Resolution - Law (LLM; select dual degrees offered)
Distance degrees - see MU Direct

E
Economics (MA, PhD)
Education degrees available online are listed under MU Direct
Educational Leadership & Policy Analysis
- Emphasis Area: Educational Administration (EdSp, PhD)
- Emphasis Area: Educational Leadership (EdD)
- Emphasis Area: Educational Policy Studies (PhD)
- Emphasis Area: Higher and Continuing Education (MA, M Ed, PhD)
- Emphasis Area: Learning and Instruction (M Ed, concentration in Educational Leadership)

Educational, School, and Counseling Psychology
- Emphasis Area: Counseling Psychology (M Ed, EdSp, PhD)
- Emphasis Area: Educational Psychology (MA, M Ed, PhD)
- Emphasis Area: Health Education & Promotion (MA, M Ed, PhD)
- Emphasis Area: School Psychology (EdSp, PhD)

Electrical and Computer Engineering (MS, PhD)
Engineering (ME; see specific engineering disciplines for MS & PhD degrees)
English (MA, PhD)
Exercise Physiology - see Nutrition and Exercise Physiology

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F
Financial Planning - see MU Direct
Fisheries & Wildlife Sciences (MS, PhD)
Food Science (MS, PhD)
Forestry (MS, PhD)
French (MA) - see Romance Languages & Literatures

G
Genetics Area Program (interdisciplinary PhD)
Geography (MA)
Geological Sciences (MS, PhD)
German (MA)
Gerontology (MA) - see MU Direct

H
Health Administration (MHA; dual degrees)
Health Administration, Executive Program (MHA) - see MU Direct
Health and Bioinformatics (MS)
    Emphasis Area: Health Informatics
Health Informatics, Executive Program (MHS) - see MU Direct
History (MA, PhD)
Human Development & Family Studies (MA, MS; dual degrees)
    Emphasis Area: Gerontology (MA)
    Emphasis Area: Youth Development (MA)
Human Environmental Sciences (PhD)
    Emphasis Area: Architectural Studies
    Emphasis Area: Consumer & Family Economics - see Personal Financial Planning
    Emphasis Area: Human Development & Family Studies
    Emphasis Area: Human Nutrition, Foods, and Food Systems - see Nutritional Sciences
    Emphasis Area: Personal Financial Planning
    Emphasis Area: Textile & Apparel Management

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I
Industrial & Manufacturing Systems Engineering (MS, PhD, dual degrees)
Informatics (PhD)
- Emphasis Area: Bioinformatics
- Emphasis Area: Health Informatics

Information Science & Learning Technologies
- Emphasis Area: Educational Technology (MA, M Ed, EdSp)
- Emphasis Area: Learning & Instruction (M Ed)
- Emphasis Area: Library Science (MA with initial library certification)

Information Science & Learning Technologies (PhD)

J
Journalism (MA, PhD, dual degrees)
Journalism online degrees are listed under MU Direct

L
Law (dual degrees, refer to http://law.missouri.edu/students/)
Law, Dispute Resolution (LLM)
Learning, Teaching and Curriculum
- Emphasis Area: Art Education (M Ed, PhD)
- Emphasis Area: Business and Marketing (M Ed)
- Emphasis Area: English Education (M Ed, PhD)
- Emphasis Area: Early Childhood Education (PhD)
- Emphasis Area: Elementary Education (MA, M Ed, EdSp, EdD, PhD)
- Emphasis Area: Learning and Instruction (M Ed)
- Emphasis Area: Literacy Education (M Ed, EdSp, EdD, PhD)
- Emphasis Area: Mathematics Education (M Ed, EdSp, PhD)
- Emphasis Area: Music Education (MA, M Ed, EdSp, PhD)
- Emphasis Area: Reading Education (M E d, EdSp, EdD, PhD)
- Emphasis Area: Science Education (M Ed, EdSp, PhD)
- Emphasis Area: Social Studies Education (M Ed, PhD)
- Emphasis Area: Teaching English to Speakers of Other Languages (M Ed, MEd, EdSp, PhD)

Library Science (MA) - see MU Direct

continued on next page

M
Mathematics (MA, MS, MST, PhD; dual degrees)
Mathematics, Applied (MS) - see Mathematics
Mechanical & Aerospace Engineering (MS, PhD)
Medicine (for MD, MD/MS, or MD/PhD refer to http://som.missouri.edu)
Medical Pharmacology & Physiology (MS, PhD)
Molecular Microbiology and Immunology (PhD)
Molecular Microbiology and Immunology (cooperative MD/PhD)
Music (MA, MM)

N
Natural Resources (MNR)
Neuroscience Interdisciplinary Program (MS, PhD)
Nuclear Engineering (MS, PhD)
    Emphasis Area: Power Engineering
    Emphasis Area: Health Physics
    Emphasis Area: Medical Physics
Nursing (MS, DNP, PhD)
Nursing online degrees are listed under MU Direct
Nutrition and Exercise Physiology
- Exercise Physiology (MA, PhD)
- Nutrition (MS, PhD)

O
Occupational Therapy (MOT)
Online degrees - see MU Direct

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P
Parks, Recreation & Tourism (MS)
Pathobiology Area Program (PhD)
Pathology & Anatomical Sciences (MS)
Personal Financial Planning (MS, dual degree)
    Emphasis Area: Consumer & Family Economics
    Emphasis Area: Personal Financial Management
Pharmacology - see Medical Pharmacology & Physiology
Philosophy (MA, PhD)
Physics and Astronomy (MS, PhD)
Physical Therapy (DPT)
Physiology - see Medical Pharmacology & Physiology
Plant, Insect and Microbial Sciences (MS, PhD)
Political Science (MA, PhD)
Psychology
    Emphasis Area: Child Clinical – Developmental (MA, PhD)
    Emphasis Area: Cognition & Neuroscience (MA, PhD)
    Emphasis Area: Clinical Psychology (MA, PhD)
    Emphasis Area: Clinical and Quantitative Psychology (PhD)
    Emphasis Area: Developmental Psychology (MA, PhD)
    Emphasis Area: Quantitative Psychology (MA, PhD)
    Emphasis Area: Social/Personality Psychology (MA, PhD)
Public Affairs (MPA, PhD)
Public Health (MS) (degree offered by Family and Community Medicine)
Public Health (MPH, dual degrees) (degree offered by Public Health)
    Concentration Area: Health Promotion and Policy
    Concentration Area: Veterinary Public Health

R
Religious Studies (MA)
Romance Languages & Literatures (MA)
    Emphasis Area: Foreign Language Teaching emphasis, in Spanish or French
Romance Languages & Literatures (PhD)
    Emphasis Area: French
    Emphasis Area: Spanish
Rural Sociology (MS, PhD)
Russian & Slavonic Studies (MA)

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S
Social Work (MSW, PhD)
Sociology (PhD)
Soil, Environmental & Atmospheric Sciences (MS, PhD)
Spanish (MA) - see Romance Languages & Literatures
Special Education
- Emphasis Area: Administration and Supervision (EdD, PhD)
- Emphasis Area: Autism (MA, MEd)
- Emphasis Area: Behavioral Disorders (MA, M Ed, EdD, PhD)
- Emphasis Area: Developmental Disabilities (Cognitive Impairments) (EdD, PhD)
- Emphasis Area: Early Childhood Special Education (MA, M Ed, EdD, PhD)
- Emphasis Area: Gifted Education (MA, M Ed)
- Emphasis Area: Learning Disabilities (MA, M Ed, EdD, PhD)
- Emphasis Area: Special Education General (Cross Categorical) (EdSp, EdD, PhD)

Statistics (MA, PhD)
- Emphasis area: Biostatistics (MA)

T
Textile & Apparel Management (MA, MS)
Theatre (MA, PhD)

V
Veterinary Biomedical Sciences – see Biomedical Sciences MS degrees with Emphasis Areas
Veterinary Pathobiology (PhD) – see Pathobiology Area Program
Veterinary Medicine (for DVM, see College of Veterinary Medicine)

W
Women's & Gender Studies (Graduate Minor)

Y
Youth Development (MA) - see MU Direct

END OF AVAILABLE DEGREES LIST

Master's Degrees Requirements and Policies

The purpose of this section is to provide an overview of Graduate School's policies. Students considering a master's degree should read all of the information below to fully understand the requirements of advanced study (e.g., residency, plan of study and time lines for completion) at MU.

MU confers a variety of master's, dual master's degrees or dual master's/professional degrees to students who satisfy the general requirements of the Graduate School and the specific requirements of the degree-granting department or area program. Designated **graduate minors** and **certificates** are available in some academic fields. **Thesis and non-thesis options** are available for select plans of study; students must consult with individual degree programs for more information.

Master's Residency Requirements

The faculty of each graduate program determines its own residency requirements for master's degrees, subject to initial review by the Graduate Faculty Senate. Consult with the academic program for requirements. For academic programs that choose to maintain the traditional regulation concerning residency for master's students, the following applies: the student must complete a minimum of 24 semester hours of MU graduate courses which are taught by MU faculty and which are approved by the academic program and the Graduate School. Students who cannot fulfill residency requirements are encouraged to consider Mizzou Online for available degrees.

Graduation and Commencement Deadlines and Forms

It is recommended that students refer often to the Graduation & Commencement Deadlines for Master's Students to avoid missing any important graduation or commencement deadlines. In addition to various deadlines, student must also submit a variety of necessary paperwork. By the end of the first year of master's work at MU, a student must begin submitting degree program forms, which will aid the department and the Graduate School in planning an academically

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appropriate course of study and in tracking the student's progress toward degree completion. These forms include the following:

Program of Study. Outlines the course work to be included in the student's degree program. Due in the Graduate School by the end of the second semester unless the degree can be completed in two semester. In that case, the form is due by the end of the first semester. Plan of Study (M1) form (pdf)

Request for Thesis Committee (thesis option only). Is a membership proposal for the student's thesis committee. Due in the Graduate School by the end of the second term. Request for Thesis Committee (M2) form (pdf)

Report of Master's Examining Committee. Reports the results of the thesis defense, master's comprehensive exam, project presentation, portfolio review, etc. Due in the Graduate School two weeks prior to graduation. Report of Master's Examining Committee (M3) form (pdf)

Choosing an Adviser

Graduate Committee Membership for Jointly Appointed Faculty

Chapter 320 of the Collected Rules and Regulations for the University of Missouri requires that all jointly appointed faculty members will have designated Primary Appointment and Primary Departments well as affiliation with one or more involved academic programs. These affiliations affect membership status of jointly appointed faculty on graduate student committees as follows:

- Faculty members may serve as adviser/committee chair when their Primary Appointment is in the graduate student's home academic program.
- When the graduate student's home academic program is the involved academic program for a jointly appointed faculty member, this person may serve as chair/adviser with the approval of the director of graduate studies from the student's home academic department.
- A faculty member can serve as an Internal Member only when their Primary Appointment is in the graduate student's home academic program.

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- When a graduate student's home academic program is the involved academic program for a jointly appointed faculty member, he or she may serve as either an Internal or External Member of the committee.

Graduate Committee Membership for Adjunct Faculty
Adjunct Faculty may serve as a Committee Chair or Committee Member only in academic programs in which they are appointed and approved for Graduate or Doctoral Faculty membership as appropriate for the student's degree (Master's or Doctoral). Service on graduate committees outside the academic program in which they are appointed requires a recommendation by the director of graduate studies from the student's home academic program and approval by the vice provost for advanced studies and dean of the Graduate School.

Master's Plan of Study

Minimum Credit Hours for Degrees

The Graduate School has established a campuswide minimum of 30 hours of graduate credit beyond the bachelor's degree (or its equivalent) for a master's degree. Fifteen of the 30-hour minimum must be selected from courses numbered at 8000 or 9000 level. No more than 40 percent of the 30-hour credit requirement can be satisfied by a combination of special investigations, Research, Readings and / or Problems courses. http://gradschool.missouri.edu/policies/masters/requirements/plan-study-requirements.php

Completing a Plan of Study Form

After performing satisfactorily for a minimum of one semester, the student, with the adviser's assistance, completes the Plan of Study form (pdf) that outlines the plan of study for the student's graduate program. The form is forwarded through the academic program's director of graduate studies to the Graduate School for approval. The Plan of Study form must be filed with the Graduate School by the end of the student's second semester of enrollment. Upon approval of the program by the Graduate School, the student is a candidate for the degree. If a change is necessary to a student's approved Plan of Study form, a Plan of Study Substitution form must be used.

NOTE: An academic program may have additional credit hour (or other) requirements. Check with the program of interest to confirm degree requirements.

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Correspondence Credit toward a Master's Degree
Although correspondence or extension course credit earned at any other campus is not accepted by the Graduate School, the School will accept up to eight hours of correspondence courses that are authorized for graduate credit and offered by MU's faculty through the Center for Distance and Independent Study at 136 Clark Hall.

Transfer Credit toward a Master's Degree
A maximum of 20 percent of the number of credit hours required for a student's degree may be graduate credits transferred from another university, including another campus of the University of Missouri system upon the recommendation of the adviser, the approval of the academic program director of graduate studies and the Graduate School.

Note: the above represents a change in policy and becomes effective for graduate students beginning their master's programs during the fall semester 2001. Students who began their master's programs prior to the fall semester 2001 have the option of using the above regulation or the regulation in place at the time they began their degree program. The MU Graduate School will review the transfer request to determine if the credit meets the minimum guidelines. If so then the Graduate School will process the request so that each transfer course will appear on the student's transcript.

How to Request Transfer of Credit
1. The request or transfer credit must first be approved by the student's adviser and the department's director of graduate studies.
2. Once approved the student submits his/her Plan of Study or Course Substitution form to add the transfer work to the Plan of Study along with an unopened, official transfer transcript if one is not currently on file with the Graduate School.
3. Once the Graduate School has received the request it will be reviewed to determine if minimum requirements have been met.
4. If approved then the Graduate School will process the request so that the transfer credit appears on the MU student record.

Minimum Transfer Requirements
Transfer course work:
- must be less than eight years old by the time the master's degree is conferred;

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- was taken for graduate credit and clearly marked as such on the transfer transcript, complete with credit hours and a grade;
- is limited to no more than 20 percent of the total course work on the student's Plan of Study form;
- is from a regionally accredited institution in the U.S. or an overseas institution that is recognized by its country's Ministry of Education as a graduate degree granting institution; and
- is not extension or correspondence credit (see policy on correspondence credit above)

Credit Toward a Second Master's Degree

A student who has completed one master's degree at the University of Missouri or elsewhere may, upon recommendation of the adviser and approval by the academic program's director of graduate studies and the Graduate School, present a maximum of eight hours of credit earned in the previous program toward a second master's degree.

Forming a Master's Thesis Committee

When a thesis is required for completion of a master's degree, the student is required to submit a Request for Thesis Committee (M2 form) or a dual-masters Request for Thesis Committee (DM2 form) for approval by the academic program's director of graduate studies and the Graduate School by the end of the student's second semester.

A thesis committee is composed of three members of the MU faculty: a major adviser from the academic program, a second reader from the academic program and an outside reader who is a member of the graduate faculty from a different MU graduate program.

After the Request for Thesis Committee form has been filed, any changes must be submitted through the Change of Committee form.

Approval of a Non-MU Faculty Member

Upon approval of the academic program's director of graduate studies, the student may petition the Graduate School to allow a person who is not a member of the MU graduate faculty to serve as the third reader. The petition should include a written justification for such a request and a copy of the person's curriculum vitae. The Graduate School maintains copies of curricula vitae previously received and approved, and if such a request is anticipated, the student should contact the Graduate School to see if the curriculum vitae of a particular person is already on file.

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The Thesis Process
If a thesis is required, it must be the student's own work and must demonstrate a capacity for research and independent thought. A student writing a thesis should refer to the Graduate School's Guidelines for Preparing Theses and Dissertations. Academic programs may have additional requirements. The Graduate School sets deadlines for master's students for completion and submission of the thesis.

Thesis Acceptance
A thesis must be approved by the major adviser, a second reader from the academic program and an outside reader who is a member of the graduate faculty from a different MU graduate program. Students need to supply committee members with copies for review/evaluation. After successfully defending the thesis, the student will make any needed adjustments in format and corrections, based on input from the committee. The thesis is then submitted as PDF file on a CD ROM to the Graduate School by the established master's deadline.

Review the Graduate School's Web pages for additional information on the master's thesis process.

A searchable thesis and dissertation archive is maintained by the Graduate School.

Grades at the Graduate Level-Graduation Requirement
To become eligible for a master's degree, a student must have completed all MU graduate work attempted with a GPA of 3.0 (A=4.0) or higher. Review grading policies for more information.

Examination Process

Thesis Option
Where a thesis is presented in partial fulfillment of graduation requirements, students must form a thesis committee. In the final semester, the student must successfully present (defend) the thesis. Three members of the student's committee must sign the Report of the Master's Degree Examining Committee (pdf), which is then forwarded through the academic program's director of graduate studies to the Graduate School by the semester deadline.

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Non-Thesis Option
Where no thesis is presented by the candidate, a final examination committee, composed of three members from the academic program, is designated by the academic program's director of graduate studies with the approval of the Graduate School. During the final semester, the Report of the Master's Examining Committee (pdf), signed by the director of graduate studies, is forwarded to the Graduate School by the semester deadline. All candidates for the MA or MS degrees must complete either a thesis or a substantial independent project that cannot be coauthored.

Enrollment at the Master's Level

For general master's enrollment requirements go to the Graduate School's Web page on master's enrollment requirements.

Enrollment
The master's candidate must be enrolled at the University during the semester or session in which a thesis is defended, a master's project is presented, or the completion of a master's comprehensive exam is certified.

Scheduling Exams, etc.
Comprehensive exams, thesis defenses, portfolio presentations and the like may be offered during the regular semester session. Dates that are excluded from graduation examinations include breaks between regular semester sessions, national holidays where the University is not in operation and weekends.

Enrollment for Graduate Examination
Master's and educational specialist degree candidates who have completed all requirements except the final examination or the defense of the thesis/project must be enrolled when the final examination is given or the thesis/project is defended. Students who do not wish to enroll in course work during this time can enroll in "Graduate Examination" hours only.

Note: Registration in the "Graduate Examination" does not count toward enrollment certification. Students enrolled in the "Graduate Examination" would not be considered full-time or part-time.

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Graduate students must be enrolled in at least nine credit hours to be considered full-time students and at least four credit hours to be considered half-time students during fall and spring terms. For summer terms, graduate students must be enrolled in four hours to be considered full-time and two hours to be considered half-time students.

Students with financial aid or a visa should discuss plans with the Student Financial Aid office before registering for Graduate Examination hours. International students with a visa should discuss plans with MU's International Center before registering for the Graduate Examination. Failure to do so could cause serious consequences for a student's financial aid or visa status.

How Enrollment Status Affects Access to Campus Resources
Students who enroll in the Graduate Examination will not have a valid student ID and thus will not have regular access to the Student Health Center, MU Libraries, the Student Recreation Center or campus computing centers. If a student needs to use any of these services, registration in a one-, two-, or three-hour course (including graduate research courses) is required. Extra fees apply for access too.

Time Limit for Master's Degree Completion
The program for the master's degree must be completed within a period of eight years beginning with the first semester of enrollment in which the student is accepted to a degree program or from the date of the oldest coursework used on the plan of study. Individual academic programs may stipulate a shorter time period. Time spent in the armed services will not count toward the eight-year limit (see also Active Duty Policy). For any extension of this time limitation, the student must petition the Graduate School by submitting a request to the adviser who, in turn, submits a written recommendation to the Graduate School that is endorsed by the academic program's director of graduate studies. The Graduate School will notify the adviser in writing of the final decision.

For academic advice or assistance with degree program planning, students should contact their advisers. See http://gradschool.missouri.edu/policies/masters/requirements/

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Reasonable Rate of Progress for Master's Students
Reasonable rate of progress is governed by both the campus-wide policies of the Graduate School as well as academic program regulations which may be more restrictive. Failure to satisfy the Graduate School's rate of progress policies leading to dismissal is handled by the Request for Extension process.

Extension Requests for Master's Students
Extenuating circumstances that inhibit a student's rate of progress are handled through the Request for Extension process.

Dismissal
Dismissals arising from violation of academic program policies may be appealed using the Appeals Process. For additional details, graduate students should refer to the Dismissal Policy and the Extension Requests and Appeals Process.

END OF MASTER'S DEGREE REQUIREMENTS AND POLICIES SECTION

Master's Dual Degrees: Requirements and Policies

As the US workforce becomes increasingly interdisciplinary, some master's students elect to pursue two degrees in related fields concurrently, or in combination with a professional (e.g., law or medical degree.) There are two types of dual master's degrees; dual master's-professional degrees and dual master's degrees:

Definition of a dual master's-professional degree
These are cooperative degrees arranged between a graduate degree granting program and a professional degree granting program.

> *Forms and Policies for dual master's-professional degrees*
> The Graduate School oversees the graduate degree portion of the dual master's/professional degree therefore student must apply to both programs and let them know of their interest in the dual program. For policies and forms pertaining to the master's portion of the dual master's/professional degrees please refer to the Master's Degrees Requirements and Policies section of this catalog starting on page 28.

Definition of a dual master's degree
These are cooperative degrees arranged between two graduate degree granting program and have been approved by the Graduate Faculty Senate.

> *Forms and Policies for dual master's degrees*
> The policies and forms for approved dual master's degrees can be found below.

Students must submit a separate application to each program and are admitted to both degree programs simultaneously. Because some students may not be aware of an approved dual-degree program before their arrival at MU, the option to participate in an approved dual-degree program may be postponed until no later than the end of a student's second semester at MU.

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2010-2011 Dual Graduate-Professional Degree Programs

For the 2010-2011 academic year, the following dual graduate-professional degree programs are available:

Approved Dual Degrees for Law Students

Several JD/graduate degree programs are available. Dual-degree programs enable students to earn two degrees concurrently, the Juris Doctor and the master's or PhD. Dual-degree students must fulfill entrance requirements for both schools, including the graduate school's entrance exam (if required) and the LSAT.

- Business Administration (JD/MBA)
- Human Development and Family Studies (JD/MA or JD/MS)
- Health Administration (JD/MA)
- Journalism (JD/MA or JD/PhD)
- Public Affairs (JD/MPA)

For more information on dual-degree programs, contact the Law School.

Approved Dual Degrees for Medical Students

Using the flexibility of the graduate and medical curriculums, students may pursue a combined MD/MS or MD/PhD degrees. Students are accepted to the joint program by a single committee. Students interested in this dual degree program should inquire at the School of Medicine's Dean's Office.

2010-2011 Dual Master's Degree Programs

For the 2010-2011 academic year, the following dual master's degree programs are available:

- Applied Mathematics — Economics
- Applied Mathematics — Electrical Engineering
- Business Administration — Health Administration
- Business Administration — Industrial Engineering
- Computer Engineering — Computer Science
- Economics — Statistics
- Health Administration — Public Administration
- Health Administration — Industrial Engineering
- Health Administration — Health Informatics

Dual Master's Graduate Degree Advising and Committees

There will be a separate adviser and committee for each degree program.

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Dean's Note: The option of a combined committee structure may be included in proposals for Senate consideration, e.g., co-advisers who would also serve as outside members, plus one additional member from each degree program, for a total of four committee members.

Dual Master's Graduate Degree Progress Forms

Special dual master's degree program forms will be used to certify plans of study, committee members and final defense/examinations. The forms are:

- Dual-Degree Plan of Study (DM1) form (pdf)
- Dual-Degree Request for Thesis Committee (DM2) form (pdf)
- Dual-Degree Report of Master's Examining Committee (DM3) form (pdf)

Eligible Credit Hours for Dual Master's Degrees

In each degree field a minimum of 18 hours of graduate courses is required with a minimum of 3 hours of 8000-level courses. The 18 hours of graduate course work is to be taken for each degree program respectively.

Example: For a dual master's degree program in Applied Mathematics and Economics, a student's plan of study must show 18 hours of Applied Mathematics graduate course work that applies only to the Applied Mathematics degree and 18 hours of Economics graduate course work that applies only to the Economics degree. Twelve hours of shared 8000-level graduate credit, which can include thesis/project research credit, as applicable. The 18 + 18 + 12 = 48 hours of graduate credit which is the minimum total hours for a dual master's degree program.

Transfer Credit into Dual Master's Graduate Degree Programs

Up to eight hours of transfer credit may be applied as follows: to one of the two degree programs, or divided between the two degree programs. The eight hours of transfer credit cannot be applied to each degree program separately.

Conferral of Dual Master's Graduate Degrees

There will be two separate diplomas awarded at the same time upon completion of all degree program requirements for both degrees.

END OF MASTER'S DUAL DEGREES REQUIREMENTS AND POLICES SECTION

Educational Specialist Degrees: Requirements and Policies

This degree, offered through the College of Education, is a 30-hour program of specialization built upon the education specialist degree, of which 24 hours must be taken with MU faculty. Six semester hours must be completed within one semester or summer session to provide an in-residence experience. Students have eight years to complete the degree from the time they are first admitted to the degree program. A student is required to take a final examination, and the report of the results must be approved by a majority of the candidate's advisory committee members and submitted to the Graduate School. The Graduate School's Web pages provide additional information on the Educational Specialist degree policies. Also consult the College of Education's Web site.

Required Educational Specialist Forms
The Graduate School obtains students' official academic records as soon as they complete their first terms of enrollment. Each of the following forms is completed at the departmental/program level, routed for required signatures and forwarded to the Graduate School in 210 Jesse Hall.

Forms are reviewed by staff in the Graduate School, given the vice provost/dean's signature if approved, and a copy is returned to the academic program office. If changes/corrections are needed, or if any signatures are missing, the forms will be returned to the department for corrective measures. If any faculty signatures are illegible, we ask that departments print a correct spelling below any such signatures.

Request for the Educational Specialist Advisory Committee *(S-1 form, PDF)*
The S-1 form serves as official documentation of who serves on a student's advisory committee. It should be submitted to the Graduate School by the end of a student's second semester.

Plan of Study for the Educational Specialist Degree *(S-2 form, PDF)*.
The S-2 form provides the student, academic program/department and Graduate School with a plan for all the course work that will comprise a plan of study. It serves as a general plan to follow. Changes on the plan

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of study can be made easily by submitting a Course Substitution form, available from departments or the Graduate School. The S-2 form should be submitted to the Graduate School preferably by the end of a student's second semester and no later than the beginning of a student's second year of study.

Report of the Educational Specialist Examining Committee *(S-3 form, PDF)* This form is submitted by the academic program/department and reports the final results of a student's comprehensive examination. Students are encouraged to consult with their departments to make sure the departments submit the S-3 form shortly after the exam has been graded.

Correspondence Credit toward the Education Specialist Degree
Although correspondence or extension course credit earned at any other campus is not accepted by the Graduate School, the School will accept up to eight hours of correspondence courses that are authorized for graduate credit and offered by MU's faculty through the Center for Distance and Independent Study at 136 Clark Hall.

Transfer Credit toward the Education Specialist Degree
A maximum of 20 percent of the number of credit hours required for a student's degree may be graduate credits transferred from another university, including another campus of the University of Missouri system upon the recommendation of the adviser, the approval of the academic program director of graduate studies and the Graduate School.

Note: The above represents a change in policy and becomes effective for graduate students beginning their education specialist programs during the fall semester 2001. Students who began their education specialist programs prior to the fall semester 2001 have the option of using the above regulation or the regulation in place at the time they began their degree program. The MU Graduate School will review the transfer request to determine if the credit meets the minimum guidelines. If so then the Graduate School will process the request so that each transfer course will appear on the student's transcript.

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How to Request Transfer of Credit

1. The request or transfer credit must first be approved by the student's adviser and the department's director of graduate studies.
2. Once approved the student submits his/her Plan of Study or Course Substitution form to add the transfer work to the Plan of Study along with an unopened, official transfer transcript if one is not currently on file with the Graduate School.
3. Once the Graduate School has received the request it will be reviewed to determine if minimum requirements have been met.
4. If approved then the Graduate School will process the request so that the transfer credit appears on the MU student record.

Minimum Transfer Requirements

Transfer course work:

- must be less than eight years old by the time the education specialist degree is conferred;
- was taken for graduate credit and clearly marked as such on the transfer transcript, complete with credit hours and a grade;
- is limited to no more than 20 percent of the total course work on the student's Plan of Study form;
- is from a regionally accredited institution in the U.S. or an overseas institution that is recognized by its country's Ministry of Education as a graduate degree granting institution; and
- is not extension or correspondence credit (see policy on correspondence credit above)

Special Types of Credit for the Educational Specialist Degree

A maximum of six semester hours completed with a grade of B or better may be accepted in transfer from institutions accredited to offer doctoral degrees. Off-campus courses authorized for graduate credit and offered by MU faculty members and courses offered through the Center for Independent Study taught by MU faculty may be included in the program.

Grades at the Graduate Level-Graduation Requirement

To become eligible for a education specialist degree, a student must have completed all MU graduate work attempted with a GPA of 3.0 (A=4.0) or higher. Review grading policies for more information.

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Enrollment
The educational specialist candidate must be enrolled at the University during the regular semester session in which comprehensive exams are taken, portfolio or project is presented, etc.

Time Limit for Education Specialist Degree Completion
The program for the education specialist degree must be completed within a period of eight years beginning with the first semester of enrollment in which the student is accepted to a degree program or from the date of the oldest coursework used on the plan of study. Individual academic programs may stipulate a shorter time period.

Time spent in the armed services will not count toward the eight-year limit (see Active Duty Policy). For any extension of this time limitation, the student must petition the Graduate School by submitting a request to the adviser who, in turn, submits a written recommendation to the Graduate School that is endorsed by the academic program's director of graduate studies. The Graduate School will notify the adviser in writing of the final decision.

For academic advice or assistance with degree program planning, students should contact their advisers.

Reasonable Rate of Progress for Education Specialist Students
Reasonable rate of progress is governed by both the campuswide policies of the Graduate School as well as academic program regulations which may be more restrictive. Failure to satisfy the Graduate School's rate of progress policies leading to dismissal are handled by the Request for Extension process, and the decision of the vice provost for advanced studies and dean of the Graduate School in these matters is binding.

Extension Requests for Education Specialist Students
Extenuating circumstances that inhibit a student's rate of progress are handled through the Request for Extension process. The decision regarding an extension is made by the vice provost for advanced studies and dean of the Graduate School, and is binding.

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Dismissal

Dismissals arising from violation of academic program policies may be appealed using the Appeals Process. For additional details, graduate students should refer to the Dismissal Policy and the Extension Requests and Appeals Process pages on the Graduate School Web site.

END OF EDUCATIONAL SPECIALIST DEGREE REQUIREMENTS AND POLICIES SECTION

Doctoral Degrees Requirements and Policies

The Graduate School grants two types of doctoral degrees: the doctor of philosophy (PhD) and the doctor of education (EdD). Consult with individual departments to learn about the availability of degrees. To obtain either doctoral degree, a student must follow the general regulations of the Graduate School as well as special requirements of the degree program. It is the student's responsibility to adhere to all regulations and satisfy the graduation requirements of the Graduate School and the degree program. An individual who has held, at any time, a regular tenure-track appointment in an MU academic program is not eligible for a doctoral degree from that department or the area program in which that department participates.

Doctoral Qualifying Examination or Process

Prior to official admission into a doctoral program, the student must pass a qualifying examination or process. A department or area program may limit the number of times this examination or process may be attempted. After the qualifying process is complete and the doctoral committee has been confirmed, the Qualifying Examination Results and Doctoral Committee Approval (D1) form should be submitted to the Graduate School, no later than the end of the second semester of enrollment.

Selecting a Doctoral Adviser

The student selects an adviser or co-advisers, by mutual consent, from doctoral faculty members who are dissertation supervisors in the department or area program in which the major work is planned. In the event that an adviser retires or leaves MU, he/she may continue to serve as a student's adviser unless there is written academic program policy prohibiting such an arrangement. If an adviser is unable or unwilling to continue to serve, the academic program, with the leadership of the director of graduate studies, will assist to ensure that a replacement is found.

Forming a Doctoral Program Committee

The doctoral program committee must be recommended by the student's adviser and approved by the academic program's director of graduate

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studies and the Graduate School before one year has elapsed following the student's first registration as a doctoral student. The Qualifying Examination Results and Doctoral Committee Approval (D1) form is due to the Graduate School office by the end of the student's second semester.

Committee Changes. Changes to the committee must be submitted on the Change of Committee form.

Duties. All members of the doctoral program committee will be intimately involved and will actively participate in the activities of the doctoral student at all the stages of the student's career at MU, except in some cases in the qualifying examination/process. The committee also may participate in the assessment of a student's background and potential for success in the academic program's doctoral program. Committee members may call a meeting of the full committee at any time to discuss the student's progress.

Membership Requirements for Doctoral Committees. The doctoral program committee shall be composed of a minimum of four members of the MU graduate faculty and will include at least three members from the student's doctoral degree program and an outside member from a different MU program. At least two of the doctoral committee members must be MU doctoral faculty. (*Note:* This policy is effective for students who begin their doctoral programs during the Fall 2005 Term. For students who began their doctoral programs before the fall 2005 semester, consult the appropriate catalog or the Graduate School.)

Additional committee members with specialized expertise who do not meet the criteria for the MU graduate faculty or doctoral faculty may serve on a doctoral committees as a fifth or sixth member, with special permission of the dean of the Graduate School.

Graduate Committee Membership for Jointly Appointed Faculty. Chapter 320 of the Collected Rules and Regulations for the University of Missouri requires that all jointly appointed faculty members will have a designated Primary Appointment and Primary Department as well as affiliation with one or more involved departments or units. These affiliations affect membership status of jointly appointed faculty on graduate student committees as follows:

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Committee Chair/Adviser. A faculty member may serve as adviser/committee chair when his or her primary appointment is in the graduate student's home academic program. When the graduate student's home academic program is the involved academic program for a jointly appointed faculty member, the person may serve as chair/adviser with the approval of the director of graduate studies from the student's home academic program.

Doctoral Committee Member. A faculty member can serve only as an Internal Member when his or her Primary Appointment is in the graduate student's home academic program. When a graduate student's home academic program is the Involved academic program for a jointly appointed faculty member, he or she may serve as either an Internal or External Member of the committee.

Graduate Committee Membership for Adjunct Faculty. Adjunct faculty may serve as a committee chair or committee member only in academic programs in which they are appointed and approved for graduate or doctoral faculty membership as appropriate for the student's degree (master's or doctoral). Service on graduate committees outside the academic program in which an adjunct member is appointed requires a recommendation by the director of graduate studies from the student's home academic program and approval by the dean of the Graduate School.

Doctoral Plan of Study & Degree Requirements

The doctoral program committee provides academic program approval of the student's Plan of Study which will prepare the student for research or scholarly investigation in the chosen field of study. The plan of study includes a list of the courses and the credit to be earned. By successfully completing the plan by deadlines, a doctoral student will:

- Prepare the student for research or scholarly investigation in the chosen field of study.
- Satisfy the credit-hour and residency requirement of the academic program.
- Satisfy any special requirements (proficiency in foreign languages, collateral field, doctoral minor, other special research skills) imposed by the department or area program.
- Satisfy the Graduate School's requirement for a minimum of 15 hours of MU coursework at the 8000/9000 level (exclusive of research, readings, and problems).

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The committee also recommends to the dean of the Graduate School, as part of the Plan of Study, any request for transfer of graduate credit.

Changes to the plan of study should be submitted on the Plan of Study Course Substitution form.

Doctoral Credit-Hour Requirement
MU requires a minimum of 72 semester hours beyond the baccalaureate degree for the PhD and EdD degrees. The student's doctoral program committee must approve all course work used to satisfy the credit-hour requirement and may require additional course work beyond these minimums.

Transfer Credit
The doctoral committee may recommend up to 30 hours of post-baccalaureate graduate credit from an accredited university be transferred toward the total hours required for the doctoral degree. It is the responsibility of the doctoral committee to determine the appropriateness of course work for transfer credit. All requests for exceptions to this policy must be approved by the dean of the Graduate School.

Note: This policy applies to students who begin their enrollment during the Fall Term 2006 and subsequent semesters. For students who began their doctoral programs prior to the fall 2006 semester, consult the appropriate catalog or the Graduate School for policies pertaining to transfer of credit.

Extension & Correspondence Credit in Doctoral Programs. The doctoral committee may recommend that courses taken through MU's Extension division be counted toward the credit-hour requirement. Extension or correspondence course work from institutions other than MU may not be used to meet the total hours required for the doctoral degree.

Time Limits on Transfer Credits. All courses to be applied to the plan of study must be completed within eight years of filing the plan.

Grades at the Graduate Level
To become eligible for a degree, a doctoral student must have completed all MU graduate work attempted with a GPA of 3.0 (A=4.0) or higher. Review grading policies for more information.

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Foreign Language Proficiency
In general, an English-speaking student may establish foreign language proficiency, if it is required, by demonstrating an ability to translate into English two foreign languages; or by demonstrating a high order of fluency in one language; that is the ability to read, write and converse in that language and to translate that language into English and English into that language.

Plan of Study Completion before Doctoral Comprehensive Exam
The student must substantially complete the course work outlined in the Plan of Study to the satisfaction of the doctoral program committee and the Graduate School before being declared ready for the comprehensive examination.

Doctoral Comprehensive Examination
The student must be enrolled to take the doctoral comprehensive examination. It is to be administered only when MU is officially in session. The comprehensive examination is the most advanced posed by MU. It consists of written and oral sections. It must be completed at least seven months before the final defense of the dissertation. The two sections of the examination must be completed within one month.

Written Section. The written section or sections of the examination may be conducted in one or both of the following two ways:

1. The written sections may be arranged and supervised by the major adviser, in which case questions are prepared and graded by the doctoral program committee.

2. The major adviser may delegate responsibility for arranging, preparing, supervising and grading the written sections of the examination to one or more departmental/program committees appointed for this purpose.

Successful Completion. For the comprehensive examination to be successfully completed, the doctoral program committee must vote to pass the student on the entire examination, both written and oral sections, with no more than one dissenting or abstaining vote. A report of examination results, carrying the signatures of all members of the committee, must be sent to the Graduate School and the student no later than two weeks after the comprehensive examination is completed.

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Exam Failure. A failure of either the written or oral section of the exam constitutes failure of the comprehensive exam. If a failure is reported, the committee also must include in the report an outline of the general weaknesses or deficiencies of the student's work. The student and the committee members are encouraged to work together to identify steps the student might take to become fully prepared for the next examination.

Request for Clarification. If the student believes that the advice given by the committee is inadequate, the student may send a written request for clarification to the committee. A copy of this request should be sent to the Graduate School as well. The committee must respond to this request in writing within two weeks and a copy must be filed with the Graduate School.

Retaking the Comprehensive Examination. The student who fails may not take a second comprehensive examination for at least 12 weeks. Failure to pass two comprehensive examinations automatically prevents candidacy.

Doctoral Candidacy & Continuous Enrollment

Candidacy for a doctoral degree is established by passing the comprehensive examination. Status as a continuous enrollment doctoral student begins the term after the term in which the comprehensive exam was successfully completed. Students must maintain continuous enrollment during their candidacy (the period after successful completion of the comprehensive examination).

Procedure for Continuous Enrollment. Candidacy is maintained by enrolling in 9090 Research (or 9990 Research for some Engineering students) for two semester hours each fall and spring semester and for one semester hour each summer session up to and including the term in which the dissertation is defended. Continuous enrollment provides access to an adviser's support, doctoral program committee guidance and university research facilities for completion of the dissertation. Failure to enroll continuously in two hours of approved courses until the doctoral degree is awarded terminates candidacy.

Reestablishing Candidacy After Time Off. Candidacy may be reestablished by paying the registration and late fees owed and completing the

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requirements specified by the student's doctoral program committee. Registration fees owed may not exceed the amount owed for seven terms, regardless of the number of terms beyond seven for which the student failed to continuously enroll. The committee's requirements may include a second comprehensive examination or evidence of currency in the research field as suggested by publications in refereed journals. Candidacy is reestablished when the student's adviser and the departmental, area program or divisional director of graduate studies submits a written request to the Graduate School explaining the basis for the decision. Once approved, a Request to Re-enroll form (pdf) must be completed by the student and sent to the department/program for processing.

The Doctoral Dissertation

The dissertation must be written on a subject approved by the candidate's doctoral program committee, must embody the results of original and significant investigation and must be the candidate's own work.

Enrollment Status and Reporting. The candidate must be continuously enrolled to defend the dissertation, which can only be defended when MU is officially in session. A report of the dissertation defense, carrying the signatures of all members of the committee, is sent to the Graduate School before the deadline preceding the anticipated date of graduation. For the dissertation to be successfully defended, the student's doctoral committee must vote to pass the student on the defense with no more than one dissenting or abstaining vote.

Required Dissertation Format. Every doctoral candidate should review the Guidelines for Preparing Theses and Dissertations from the Graduate School and should consult the director of graduate studies for academic program style requirements. All dissertation defenses shall be open to the general faculty. Academic programs are encouraged to announce dissertation defense dates to academic program colleagues.

Submission of Dissertation to the Graduate School. The final copy of the dissertation must be submitted to the Graduate School as a PDF file on a CD-ROM. Specific instructions are provided in the Guidelines for Preparing Theses and Dissertations.

A searchable thesis and dissertation archive is maintained by the Graduate School.

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Reasonable Rate of Progress
Reasonable rate of progress is governed by both the campuswide policies of the Graduate School listed below as well as academic program regulations which may be more restrictive. Failure to satisfy the Graduate School's rate of progress policies leading to dismissal is handled by the Request for Extension process.

For academic advice or assistance with degree program planning, students should contact their advisers.

Dismissals arising from violation of academic program policies may be appealed using the Appeals Process. Students should also refer to the section on the Dismissal Policy for additional details.

Time Limits for Doctoral Degree Completion
Three Graduate School policies govern the Reasonable Rate of Progress established for doctoral students. To determine which is applicable to a particular student, see the policies below:

Students Who Began Their Program in Fall 2000 to the Present. Effective fall semester 2000, a doctoral student must successfully complete the comprehensive examination within a period of five years beginning with the first semester of enrollment as a PhD student. In addition, the program for the doctoral degree must be completed within five years of passing the comprehensive examination. Individual departments or area programs may stipulate a shorter time period. For an extension of this time the student must petition the Graduate School by submitting a request to the adviser who, in turn, submits a written recommendation to the Graduate School which has been endorsed by the department or area program director of graduate studies.

Doctoral Students Who Passed Comps Between Fall 1994 and Summer 2000. Doctoral candidates who passed their comprehensive examinations between the beginning of the fall semester 1994 through summer session 2000 will have no more than five years after passing the comprehensive examination to complete the doctoral degree.

Doctoral Students who Passed Comps Before Fall 1994. Doctoral candidates who passed their comprehensive examinations before fall semester 1994 must complete their degree programs within eight

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calendar years beginning with the first semester of enrollment as a doctoral student.

Doctoral Degree Extension Request

Regardless of when a student entered the program or passed the comprehensive exam, any candidate requiring additional time must submit a request for an extension. On petition of the candidate and the candidate's academic program, an extension of time may be granted by the Graduate School. Academic programs specifically reserve the right to recertify currency in the discipline. All requests for extensions should be endorsed by the academic program's director of graduate studies and accompanied by a description of the process whereby currency in the discipline is certified, if required by the academic programs. (See also Active Duty Policy.)

Doctorate of Education (EdD): Special Requirements and Policies

General regulations for the doctorate of education (EdD) may be found at http://gradschool.missouri.edu/policies/doctoral/doctorate-education.php.

To be admitted into a doctorate of education program, the student must have attained the degree of master of arts with a major in education, a degree of master of education, or the quantitative and qualitative equivalent of one of these degrees from an accredited college or university.

EdD Qualifying Exam

If required, the qualifying examination must be successfully completed before the plan of study is determined by the adviser and the student in cooperation with the doctoral advisory committee. This program must constitute a well-organized plan of professional specialization in one of the major fields of education, with one or more supporting fields.

EdD Plan of Study

A minimum of 72 semester hours of graduate level course work beyond the bachelor's degree is required for the degree of doctor of education degree. The plan of study is specifically intended to meet the professional needs of the candidate. As well as pursuing course work in the professional areas of specialization, the student must

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take courses in educational statistics, advanced educational statistics, methods of educational research and one research elective course. Foreign languages are not required, except as may be determined by the student's doctoral advisory committee.

EdD Advisory Committee

The student's adviser officially recommends for the approval by the Graduate School a doctoral advisory committee of at least five members. For students admitted Fall 2006 and later, the requirement is at least four committee members. In addition to planning the doctoral program with the student, this committee may administer a qualifying examination, which helps to assess the student's general background and potential for the EdD degree. It also guides the planning of the plan of study.

If required, the qualifying examination must be successfully completed before the plan of study is determined by the adviser and the student in cooperation with the doctoral advisory committee. This program must constitute a well-organized plan of professional specialization in one of the major fields of education, with one or more supporting fields.

EdD Comprehensive Examination

When the doctoral advisory committee determines that the needed course work has been completed with satisfactory grades, it plans the comprehensive examination (a written and oral examination that includes the candidate's major field of interest) for the degree. This examination must be taken no earlier than the second year of graduate work and be completed at least seven months before graduation. A student must be enrolled to take the comprehensive examination. It is not administered unless MU is officially in session.

For the comprehensive examination to be completed successfully, the committee must vote to pass the student with no more than one dissenting or abstaining vote. If failure is reported, the committee recommends suggested work or remedial measures. (See Comprehensive Examination under PhD Degree Regulations)

The student who fails may not take a second examination for at least 12 weeks. Failure on two comprehensive examinations automatically prevents candidacy.

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EdD Dissertation
The dissertation must be reviewed and approved by the doctoral program committee. EdD candidates are subject to the same dissertation formatting and submission requirements as PhD candidates.

A searchable thesis and dissertation archive is maintained by the Graduate School.

Dual Doctoral Degrees

As the US workforce becomes increasingly interdisciplinary, some doctoral students elect to concurrently pursue two degrees in related fields, or in combination with a law or medical degree. All graduate dual-degree programs have obtained the approval of the MU Graduate Faculty Senate.

Students must submit a separate application to each program and are admitted to both degree programs simultaneously. Because some students may not be aware of an approved dual-degree program before their arrival at MU, the option to participate in an approved dual-degree program may be postponed until no later than the end of a student's second semester at MU.

Dual Degrees for Medical Students (MD/PhD)

The MD/PhD program is for the student seeking a biomedical research career. Additional years are integrated into the medical curriculum to satisfy requirements for the PhD. This is typically accomplished after completion of the MD. PhD programs are available in diverse areas at MU.

Using the flexibility of the graduate and medical curriculum, students may pursue combined MD/MS or MD/PhD degrees. Students are accepted to the joint program by a single committee. Students interested in this dual degree program should inquire at the dean's office in the School of Medicine.

MD/PhD Financial Support. Financial support may be provided for the graduate portion of the dual-degree program. Fellowship support may be provided for the PhD portion of this program, while loan and scholarship funds may be available for the MD curriculum.

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Applying Credit for the Dual MD/PhD. Students participating in the MD/PhD Program at the University of Missouri may apply up to 30 hours of credit for courses taken during the preclinical phase of the MD program towards the 72 hour requirement for the PhD degree. These MD courses, however, cannot be used to satisfy the requirement for 15 hours of 8000/9000 of graduate level course work. The following table lists the distribution of credits for the preclinical courses among areas of study that can be used by the student and their committee in determining how many credit hours should be applied toward the PhD.

Applicable Credit Hours Toward a Dual MD/PhD by Program Area

- Biochemistry, 6 hrs
- Microbiology, 4 hrs
- Immunology, 3 hrs
- Pharmacology, 4 hrs
- Physiology, 4 hrs
- Pathology, 6 hrs
- Neurosciences, 3 hrs

END OF DOCTORAL DEGREES REQUIREMENTS AND POLICIES SECTION

Graduate Minors

Two kinds of minors are available: designated and nondesignated. See below for details.

Both designated and nondesignated minors must be approved by the student's major adviser, the student's academic program director of graduate studies and the Graduate School. In addition, the inclusion and completion of a designated minor must be approved by the director of graduate studies (or academic program chair/program director) of the academic program or interdisciplinary group offering the minor.

Designated Minors

Designated minors consist of 9–15 hours of course work approved as a graduate minor by a single academic program or interdisciplinary group and by the Graduate Faculty Senate.

Plans of Study for Designated Graduate Minors (pdf) must be submitted to the Graduate School at least one term before the conferral of the minor. Designated Graduate Minors will be conferred when the major degree is conferred. Once a student officially graduates, the notation of the designated minor will appear on the student's official transcript.

Designated Minors Available 2010-2011

Ancient Studies
Black Studies
College Teaching
Gerontology
International Development
Law and Conflict Resolution for Journalism Doctoral Students
Linguistics
Medieval and Renaissance Studies
Multicultural Psychology and Education
Museum Studies
Psychological Statistics and Methods
Statistics
Women's and Gender Studies

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Nondesignated Minors

Nondesignated minors consist of course work constituting a unified plan of study that includes a minimum of nine hours of graduate course work. These minors should be listed on a student's plan of study; however, they are not listed on a student's transcript.

Getting Approval for a Minor

Both designated and non-designated minors must be approved by the student's major adviser, the student's academic program director of graduate studies, and the Graduate School.

In addition, the inclusion and completion of a designated minor must be approved by the director of graduate studies (or academic program chair/program director) of the academic program or interdisciplinary group offering the minor.

END OF GRADUATE MINOR SECTION.

Graduate Certificates

MU offers two types of certificates at the graduate level. A "Stand-Alone" certificate is independent of a degree program (i.e., the student does not have to be enrolled in a graduate degree program at MU). In contrast, a Degree Program Certificate is available only to students who are actively seeking a graduate degree at MU. In many instances, a degree program may offer both types of certificates or an unofficial dean's certificate. For example, a graduate certificate program may offer a stand-alone certificate for non-degree seeking graduate students or as a certificate integrated with a graduate degree program.

Graduate certificates are not defined as a degree by the Graduate School. Rather, a certificate documents successful completion of a specified group of graduate courses designed to provide proficiency in a given discipline or a set of related disciplines.

Stand-Alone Certificate Requirements
All students enrolled in a stand-alone graduate certificate program will be classified as certificate-seeking graduate students. As such, they must have successfully completed the baccalaureate degree at an accredited college/university. Specific graduate certificate programs may have admission standards that exceed those for post-baccalaureate graduate students.

Up to 12 hours of graduate credit earned for graduate certificates may be applied to degree requirements for a graduate degree upon approval of the degree program.

For stand-alone graduate certificate programs, a maximum of three graduate credit hours which correspond directly to the MU graduate certificate program course requirements may be used as transfer credit from another university to satisfy the requirements for the certificate program. Please refer to the program's web sites for certificate updates. An original transcript from the other university, verifying graduate credit received for the requested hours of transfer credit, must be submitted to the Graduate School when the Plan of Study form is submitted.

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Successful Completion of a Graduate Certificate
Students will be awarded their graduate certificates upon successful completion of a well-defined program of course work. For students whose graduate certificate program is part of a graduate degree program, certificates will be awarded upon successful completion of the degree program. For students participating in a stand-alone certificate program, certificates will be awarded at the end of the term in which all the certificate program requirements have been successfully completed.

Note: Graduate certificates may be transcripted, but do not appear on diplomas.

Minimum Requirements for Earning a Graduate Certificate
In order to be awarded a graduate certificate, a graduate student must have a grade point average of 3.0 on all course work that applies to the certificate program. The same grading policies and fees apply to all graduate students participating in graduate certificate programs, whether they are degree-seeking or post-baccalaureate graduate students.

Special Circumstances for Obtaining Credit
No courses taken as a "hearer" (audit status) may be applied to a graduate certificate program. A grade of "Incomplete" can be assigned in rare instances when a student cannot complete course work due to illness or other special circumstances beyond the student's control. To obtain credit for the course, the incomplete grade must be converted to a grade within one year.

Graduate Certificates & Degree Program Admission
Acceptance to a graduate certificate program at MU does not constitute admission to a graduate degree program, nor should completion of a graduate certificate program be considered the preferred/typical route of entry into a graduate degree program at MU.

Applying Credit from a Certificate
Up to 12 hours of graduate credit earned for graduate certificates may be applied to degree requirements for a graduate degree upon approval of the degree program.

More information can be found on the Graduate School's web site at http://gradschool.missouri.edu/programs/graduate-certificates/.

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2010-2011 List of Stand-Alone Graduate Certificates

Students can earn one of these certificates regardless of whether they are enrolled in a graduate degree (master's, doctoral, educational specialist) program or not:

Autism & Neurodevelopment Disorders (Interdisciplinary)

Center for the Digital Globe (Interdisciplinary)

Community Processes (Interdisciplinary)

Education Policy (Educational Leadership and Policy Analysis)

Food Safety and Defense (Food Science)

Geographical Information Science (Interdisciplinary)

Gerontology (Human Development and Family Studies) (PDF)

Grantsmanship (Public Affairs)

Health Ethics (Health Management and Informatics)

Health Informatics (Health Management and Informatics)

Higher and Continuing Education Administration (Educational Leadership and Policy Analysis)

Jazz Studies

Multicultural Education

Nonprofit Management (Public Affairs)

Nuclear Engineering (Nuclear Engineering)

Nuclear Safeguards Science and Technology (Nuclear Engineering)

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Nursing (post-master's certificates; areas of specialization below)

- Adult Health Clinical Nurse Specialist (ACNS)
- Adult Mental Health Nurse Practitioner (MHNP)
- Adult Psychiatric & Mental Health Clinical Nurse Specialist (PMHCNS)
- Child/Adolescent Psych & Mental Health Clinical Nurse Specialist (PMHCNS)
- Family Mental Health Nurse Practitioner (FMHNP)
- Family Nurse Practitioner (FNP)
- Pediatric Clinical Nurse Specialist (PCNS)
- Pediatric Nurse Practitioner (PNP)

Organizational Change (Public Affairs)

Personal Financial Planning (Personal Financial Planning)

Public Health (Public Health)

Public Management (Public Affairs)

Science and Public Policy (Public Affairs)

Youth Development Specialist (Human Development and Family Studies; online) (PDF)

Youth Development Program Management and Evaluation (Human Development and Family Studies; online) (PDF)

2010-2011 Degree Program Certificates

A student must be enrolled in a graduate degree program (master's, doctoral or educational specialist) to earn these certificates:

Center for the Digital Globe (Interdisciplinary)

Conservation Biology (Interdisciplinary)

Dispute Resolution (Law)

Education Policy (Educational Leadership and Policy Analysis)

European Union Studies (Interdisciplinary)

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Higher and Continuing Education Administration (Educational Leadership and Policy Analysis)

Information Systems (Accountancy)

Nuclear Engineering (Nuclear Engineering)

Nuclear Safeguards Science and Technology (Nuclear Engineering; link opens Word document)

Public Health (Public Health)

Society and Ecosystems (Interdisciplinary)

Taxation (Accountancy)

END OF GRADUATE CERTIFICATE LIST

Non-Degree Graduate Study

The Non-Degree Graduate Student Program (post-baccalaureate) allows students to prepare for admission to a graduate degree program either at MU or elsewhere, explore a new discipline, take courses for career advancement, or simply to seek personal enrichment experiences. A non-degree graduate student has access to MU libraries, museums, laboratories, and recreational and athletic facilities. Some academic programs may limit the availability of their courses to non-degree graduate students. Contact the academic program in which you wish to take courses for more information.

The program is administered by the Graduate School. The non-degree graduate student may take undergraduate- or graduate-level courses but does not earn credit toward a graduate degree. Up to 12 hours of graduate credit taken as a non-degree graduate student may be applied to a graduate degree program upon approval of an academic program if the student is accepted to a degree program.

Eligibility
Applicants who hold a baccalaureate degree or its equivalent from a U.S. university or a university in which instruction is in the English language may be admitted to MU as non-degree graduate students.

International Student Eligibility
International students residing in the United States who do not satisfy the above requirement and are seeking admission as post-baccalaureate graduate students must provide evidence of proficiency in English. Either a minimum score on the TOEFL or IELTS or a minimum of 24 semester credit hours in which the student maintains a 2.0 GPA (A=4.0) in a degree program in which English was the primary language is required. The minimum required TOEFL score for entrance to the Graduate School is 500 paper-based, 61 internet-based. The Graduate School also accepts a 5.5 Academic IELTS score for admission to the Graduate school. Please consult your academic program of interest to determine if it requires higher TOEFL or IELTS scores for admission. The University of Missouri will not issue I-20s to international students so that they may enter the United States to become non-degree graduate students.

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Tuition and Fees

Non-degree graduate students must pay graduate educational and student activities fees regardless of whether they take graduate or undergraduate courses.

Financial Aid

Non-degree graduate students are not eligible to receive federal financial aid or veteran's benefits or to hold campus-sponsored assistantships.

Maintaining Good Standing

Non-degree graduate students must maintain a 3.0 GPA. If the cumulative GPA is less than 3.0, the student will be given one automatic probationary semester. If, after one semester of probation, the student's cumulative GPA does not reach 3.0, the student may be granted a second probationary semester following a successful written petition made directly to the dean of the Graduate School. (Summer sessions are not counted as probationary semesters.) If the student fails to achieve a cumulative GPA of 3.0 following the second probationary semester, the student will be made ineligible to enroll as a non-degree or degree-seeking graduate student.

If at any time a student's term or cumulative GPA falls below 2.0, the student will be ineligible to enroll as a non-degree or degree-seeking graduate student.

Switching Status to "Degree-Seeking"

Non-degree graduate students who want to earn a graduate degree (master's, doctoral or educational specialist) must:

- Submit official scores, if required by the degree program of interest, from an appropriate graduate admission examination (GRE, GMAT, MAT). The scores must be sent directly from the examination service to Graduate School Admissions, 210 Jesse Hall, Columbia, MO 65211.
- Meet Graduate School admission requirements (see "Minimum, Campus-Wide Admission Criteria" on the Admission process
- overview page).
- Apply directly to the degree program of interest using a Change of Degree form (PDF).

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At the discretion of an academic program, up to 12 hours of graduate-level courses completed while a non-degree graduate student with a grade of B or better may be applied toward a graduate degree in that academic program.

END OF NON-DEGREE GRADUATE STUDY SECTION

University of Missouri (system) Traveling Scholars

UM Traveling Scholars is designed to provide breadth and depth in the opportunities for graduate study offered at the four campuses in the University of Missouri System. It permits advanced graduate students at any one of the UM campuses to enroll in courses that are not available on the home campus.

Enrollment at the host campus is normally limited to no more than two courses a semester. Only students in good standing who have been admitted to a graduate degree program on the home campus may participate. Courses completed at the host campus must be applicable toward requirements for the degree sought by the student at the home campus as transfer credit. Credit earned as a UM Traveling Scholar cannot be used to satisfy the master's or educational specialist degree residency requirement.

The adviser must initiate the student's enrollment proposal by contacting the appropriate professor at the campus where the student wishes to study. Approval of the respective graduate deans is required. When participating in the program, the student will register for the appropriate number of hours and pay fees at the home campus.

Senior Standing Undergraduates Seeking Dual Enrollment

With the approval of the divisional and graduate deans, seniors who rank in the upper half of their class, have a B average in the most recent 45 semester hours of credit and are within 15 hours of completing graduation requirements for the first bachelor's degree may dually enroll as an undergraduate for up to six semester hours of graduate credit. Consult with divisional deans for information about exceptions to these rules for honors students.

Dual enrollment forms (PDF) must be completed and approved by the Graduate School prior to registering for the graduate level courses. Dually enrolled students are required to register for the graduate level courses using the graduate career in myZou.

This program also is available to seniors in other Missouri colleges. Additional information may be obtained from the Graduate School at 573-882-6311 or toll-free 800-877-6312.

Mizzou Online: Degrees and Certificates

Under the auspices of University of Missouri Extension, Mizzou Online is a one-stop source for off campus learning. Mizzou Online serves as the gateway for:

- The Center for Distance and Independent Study, which offers flexible, self-paced courses that are independent of academic semesters; many courses are online; credit and non-credit courses available.
- MU Direct which offers interactive semester-based courses online (over the Internet) which can lead to graduate degrees and certificates.

MU Direct courses follow a semester schedule, with students receiving course materials, syllabi and lecture notes electronically. Depending on the course, online learning may be enhanced by a combination of content delivery methods that may include software applications, videoconference, BlackBoard™, library electronic-reserves, and independent research. Most programs are completely online, while others require periodic campus visits.

A number of academic programs permit students to take one or more Mizzou Online courses before applying to a degree program. However, academic admission requirements vary by school or college, so students should verify degree program requirements. Also, beyond Mizzou Online, some academic programs offer face-to-face classes in locations other than Columbia, for select online and residential degree programs.

Visit Mizzou Online to learn about enrolling in either the Center for Distance and Independent Study or MU Direct.

Submission, Review and Public Disclosure of Theses and Dissertations

Electronic Submission Deadlines for Theses and Dissertations

The Thesis

A thesis, when required for a master's program, must be written on a subject approved by the candidate's advisory committee. The thesis must be the student's own work and must demonstrate a capacity for research and independent thought. Refer to the Master's Degree section for details.

Thesis and Dissertation Research Must Be Open to Public Disclosure

Students are prohibited from using research (data, results, methods or other content) in their theses or dissertations that could restrict subsequent publication or public disclosure of these documents. Examples of restricted information include classified or proprietary materials. It is important to note that these restrictions do not apply to non-thesis or non-dissertation research that is approved by the student's adviser and allowed by University of Missouri policies. Questions regarding the applicability of this policy to thesis or dissertation content should be referred to the MU Graduate School.

Thesis formatting guidelines may be found at http://gradschool.missouri.edu/policies/thesis-dissertation/guidelines/. Students must follow the style manual recommended by their academic program. All work must be properly cited and permission to use copyrighted materials must be obtained prior to submission.

The Dissertation

A dissertation is required for all doctoral programs and must be written on a subject approved by the candidate's advisory committee. The dissertation must include the results of original and significant investigation, and it must

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be the candidate's own work. Refer to the Doctoral Degree section for details.

Dissertation formatting guidelines may be found at http://gradschool.missouri.edu/policies/thesis-dissertation/guidelines/. Students must follow the style manual recommended by their academic program. All work must be properly cited and permission to use copyrighted materials must be obtained prior to submission.

About Third-Party Copyright

If your work contains material that has been copyrighted by another party, you may need to seek permission to use the material in your thesis or dissertation.

Examples of materials for which you would need to seek copyright permission include but are not limited to: third-party software, images, graphics, large portions of text and maps. If copyright permission is needed, you must submit written approval for the use of the copyrighted material along with your thesis or dissertation.

Substituting for Copyrighted Materials in Theses and Dissertations

The Graduate School encourages students to seek permission to use copyrighted material in their theses and dissertations. Your work is published after it is submitted in approved form to the Graduate School, and it will be available to audiences who wish to know more about the subject you investigate. The more full and complete the thesis or dissertation, the better the experience for your reader and therefore the better the response to the fruits of your hard work. However, if you are unable or unwilling to obtain copyright permission for some of the materials in your research, you may substitute for the copyrighted material as described below.

Acceptable substitutions include:

- Redrawing or tracing of maps, images, graphics, etc
- References to URLs, printed documents, or physical locations where the copyrighted material can be found

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A student whose thesis or dissertation has had copyrighted material removed prior to submission must have his or her adviser sign a document reading:

[Student's name] has removed copyrighted material from the copy of the thesis or dissertation submitted to the Graduate School for electronic publication. I certify that

- I approve the thesis or dissertation in this form;
- The student has presented accurate information as to where the removed, copyrighted material can be found

_____ _____

Adviser's name Date

Deadlines for Submission of Theses and Dissertations

Each semester the Graduate School establishes deadlines for completion of theses and dissertations. The deadlines, and other instruction for formatting and submitting a thesis or dissertation may be found on the Graduate School's Web pages at http://gradschool.missouri.edu/policies/thesis-dissertation/

Submission Requirements and Forms

A thesis or dissertation must be presented before the deadline to the MU Graduate School on a high-quality CD. The thesis or dissertation must be contained in a Portable Document Format (PDF) file, with the appropriate margins and formatting. For the 2009-2010 academic year, the CD must be readable on a standard PC running Windows XP. Additional electronic files must be included on the CD as PDF documents with the appropriate file name. If all files will not fit on one CD, a DVD or multiple CDs may be used, as long as no single file is split between CDs.

Paper Documents That Accompany the Electronic Submission

Several paper documents must be submitted with the CD, including the original signed Approval of the Committee page, paper copies of the

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Short Academic Abstract and Title Page, fees forms, release forms, and copyright agreement forms. See http://gradschool.missouri.edu/policies/thesis-dissertation/guidelines/supplements-paper-ch3.php for more information.

Review of Theses and Dissertations by the Graduate School
Before a manuscript can be accepted for publication in scholarly journals, it is examined by editorial board members, for conformance to specific format style guidelines in addition to validity of content. In much the same manner, MU Graduate School staff, acting as an editorial board, reviews every submitted thesis and dissertation for conformance to University guidelines. Failure to meet the appropriate standards will result in the rejection of your work.

Copies of Theses and Dissertations
The MU library catalogs all thesis and dissertations in the Merlin system. To locate a thesis or dissertation go to the Merlin search engine. Theses and Dissertations submitted Fall 2004 and later are available electronically from the MU Graduate School's searchable Thesis and Dissertation Archive.

Specific Questions about MU Theses or Dissertations?
Specific questions should be directed to the academic advising staff of the MU Graduate School, 210 Jesse Hall, (573) 882-9575 or (573) 882-3885 or 1-800-877-6312.

END OF SUBMISSION, REVIEW AND PUBLIC DISCLOSURE OF THESES AND DISSERTATIONS SECTION.

Measuring Graduate Student Progress

http://gradschool.missouri.edu/policies/progress/

The progress of each graduate student will be evaluated annually by the student's adviser and/or director of graduate studies.

Annual Review of Graduate Student Progress
Since 2006, all students must be assessed for satisfactory progress toward degree completion. Students must submit information into the Web-based Graduate Student Progress System. Faculty members use the system to review student records and provide feedback. The GSPS records may be updated throughout the year.

Each department/program is expected to include information about the annual review process in all printed, published or electronic information that is provided to graduate students (handbooks, pamphlets, guidelines, Web sites) and in orientation sessions for new students.

Graduate Student Progress System (GSPS)

https://gradschool.missouri.edu/policies/progress/annual-review/progress-system/

Defining "Satisfactory Progress"

The definition of "satisfactory progress" and procedures for verifying that satisfactory progress is being made may vary among departments/programs, but each department/program should have a written definition on file in the Graduate School and this policy should be communicated to graduate students during their first semester.

In the event that a definition of progress has not been filed by the department/program, satisfactory progress will be judged on the basis of the general provisions of the Graduate School listed under Master's Degrees and Doctoral Degrees in the Graduate Catalog.

The Graduate Student Progress System is designed to facilitate the collection of information necessary to properly assess the progress of graduate students. The system can also initiate a feedback loop between student and adviser, allow academic programs to generate aggregate reports on their student's achievements, and create a curriculum vitae for a student.

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The GSPS records:

- a review of students' progress toward degree completion using their Plan of Study as a guide
- professional/scholarly activity
- awards
- grant/fellowship applications and awards
- teaching and research assistantships
- internships
- and ultimately, job placement.

For additional information on measuring graduate student progress and related topics, please visit http://gradschool.missouri.edu/policies/progress/.

Note: Academic program faculty or administrators may require additional indicators of performance or achievement to accommodate the unique needs of their programs, in addition to the required GSPS documentation.

END OF MEASURING GRADUATE STUDENT PROGRESS SECTION.

Grading & Credit Policies

Grading Scale

Graduate students' grades in all courses counting toward an advanced degree are reported as:

- A (4.0) (outstanding);
- B (3.0) (entirely satisfactory);
- C (2.0) (acceptable only to a limited extent in fulfilling the requirements for an advanced degree).

No D grade may be awarded a graduate student, and a grade of F (0.0) means the work has not satisfied the minimum requirements of the course.

A "W" denotes withdrawn passing and does not affect a student's grade point average.

S/U Grading

Graduate students may be graded satisfactory/unsatisfactory (S/U) in graduate-level courses only when those courses are designated as "graded on S/U basis only" in the online Schedule of Courses available through myZou. Effective Winter Semester 1994, thesis and research hours (490) are graded on an S/U basis only. Research courses (490) were renumbered in 2003 as follows: Masters Thesis Research 8090 (8990, College of Engineering) and Doctoral Dissertation Research 9090 (9990, College of Engineering). Grades of S/U do not count in the calculation of a student's GPA, as per university regulations.

Incompletes

An incomplete grade (I) may be recorded when the student's work is incomplete but otherwise worthy of credit, or when the instructor is unable to assign a grade at the end of the semester. The student must finish this work (Problems and Research courses exempted) within the next calendar year of residence.

If the work is not completed after one calendar year, the request to change an "I" grade will require an accompanying letter of justification from the instructor. Although grades of "I" do not automatically convert to an "F" if not completed, academic programs or the instructor may establish conditions or regulations pertaining to "I" grades that are more stringent.

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Unreported Grades: NR
When grades are not reported by the instructor, these "Blank Grades" will be recorded as "NR" (Not Recorded). The NR designation will remain on the student's transcript until a letter grade is submitted. If a letter grade is not submitted, the NR can remain on the student's record indefinitely and will not revert to an "F".

Grade Changes by Faculty
Faculty members may change grades within the policies set by the faculty. Grade Change Forms, available from the faculty member's academic unit, must be completed, signed and submitted to the Office of the University Registrar - Records Dept., 126 Jesse Hall.

Graduate-Level Credit

No graduate credit is given for courses numbered below 7000. Graduate students taking 7000-level courses that are cross-leveled with 4000-level courses will be given additional course requirements in order to warrant graduate credit received for those courses. Courses at 8000/9000 level are primarily for graduate credit. 8090/9090 research (8990/9990 Research for Engineering students) is reserved for master's and doctoral degree students working on a thesis or dissertation. Effective Winter Semester 1994, thesis and research hours (490) are graded on an S/U basis only. Research courses (490) were renumbered in 2003 as follows: Masters Thesis Research 8090 (8990, College of Engineering) and Doctoral Dissertation Research 9090 (9990, College of Engineering).

Grade Point Average
A graduate student's grade point average is based on the student's entire graduate record at MU. To remain in good standing, a graduate student must maintain a cumulative GPA of 3.0 or better.

GPA and Probation
At the end of each semester, graduate students with a cumulative GPA below 3.0 are placed on probation. If at the end of the following semester the cumulative GPA is 3.0 or better, the probationary status is removed. A student on probation failing to raise the cumulative GPA to 3.0 may, on the recommendation of the department or area program, be allowed a second probationary semester.

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A student is subject to dismissal upon failure to raise the cumulative GPA to 3.0 by the end of the second probationary semester, or at any time a semester/term or cumulative GPA falls below 2.0. Note: Summer session is not counted as a semester.

GPA & Graduation
To graduate, a student must have an overall GPA of 3.0 in all graduate courses taken at MU and not just those courses listed on a plan of study.

For more information on grading, credit and related policies go to http://gradschool.missouri.edu/policies/progress/grading/.

END OF GRADING AND CREDIT POLICIES SECTION

Probation and Termination (Dismissal)

In addition to dismissal for failure to meet the usual examination and grade requirements, departments and graduate degree-granting area programs have the right to place on probation and, after at least 30 days of probation, to dismiss from their program any graduate student who is deemed to be making insufficient academic progress or whose work is not of the quality required. The faculty adviser or academic program chair must inform the Graduate School as soon as the student is notified and the probationary period begins.

The dismissal may occur at any time during a student's work toward a graduate degree.

For additional information on satisfactory progress, probation, termination, extension and appeals go to the Extension and Appeals of Satisfactory Progress Infractions section of this catalog (click here to go to that section), or go to the web page version of the catalog, found at http://gradschool.missouri.edu/policies/progress.

END OF SECTION

Honoring Deceased Graduate Students

The following policies and procedures apply in instances in which a graduate student dies before being awarded a degree.

Student Completed All Degree Requirements
If the student has completed all degree requirements, the college or school's representative (dean, assistant/associate dean or director) will contact the Office of the Provost and the vice provost for advanced studies and dean of the Graduate School to nominate the individual to receive a posthumous degree.

The diploma for the degree that the student was pursuing will be prepared in the same manner as if the student had lived. This diploma may be presented to the family of the deceased in a special ceremony, at Commencement or in whatever manner is deemed appropriate.*

Student Did Not Yet Complete Degree Requirements
If the student had not completed degree requirements but was making satisfactory progress at the time of death, a dean's certificate honoring the student can be provided by the appropriate academic unit(s). These certificates may be designed and presented in a manner that is fitting to the circumstances.*

*In some instances, presentation of the degree or certificate to family members may be made at a remembrance ceremony.

END OF SECTION

Extension and Appeals of Satisfactory Progress Infractions

The progress of each graduate student is evaluated annually by the student's adviser and/or director of graduate studies.

The definition of "satisfactory progress" and procedures for its verification may vary among departments/programs. If a department/program has instituted timelines that differ from those applying generally to graduate students (see below), these timelines should be made available to students from their entrance into the graduate degree program. If a student is authorized to diverge from progress timelines established by either the department/program or the Graduate School, this fact should be documented in written form and endorsed by the student's adviser and DGS.

Progress toward Degree

Full-time students (those taking 9 hours or more per semester) should follow the time frames associated with degree programs discussed in the Graduate Catalog under Master's Degrees and Doctoral Degrees. They must submit required forms on time and maintain a grade point average of 3.0 or better. Furthermore, they must successfully undergo their departments' annual review processes.

Part-time students should file a timeline for successful degree completion with their departments and the Graduate School. This timeline should be endorsed by the director of graduate studies and a prospective adviser by the end of the first calendar year of admission into the department/program. When these timelines conflict with time to degree guidelines laid out in the Graduate Catalog's sections on master's and doctoral degrees, they must receive the endorsement of the dean of the Graduate School.

Distinction Between Requests for Extension and Appeals

A "Request for an Extension" and an "Appeal" are distinct processes for dealing with problems related to "satisfactory progress." A "Request for

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Extension" is the appropriate course of action when a student has failed to meet satisfactory progress provisions of the Graduate School. The "Appeal Process" should be followed when a department/program has dismissed a student after the required probationary period.

Request for Extension

When there has been unsatisfactory progress with respect to meeting Graduate School time to degree limits, the student may file a written request for an extension with the dean of the Graduate School. The extension must be endorsed by the department/program's director of graduate studies and the student's major adviser and include a timeline for completion of the degree. If an extension is granted by the dean, the student will be given a specified period of time to meet the requirements for progress to degree. Please contact the Graduate School for more information.

Termination

In addition to dismissal for failure to meet the usual examination and grade requirements, departments/programs have the right to place on probation, and, after a period of probation, to dismiss any graduate student who is deemed to be making insufficient academic progress or whose work is not of adequate quality as determined by the department/program. The faculty adviser or academic program chair must inform the Graduate School as soon as the student is notified and the probationary period begins. Probation and dismissal may occur at any time during a student's work toward a graduate degree.

When a department/program determines that a student is not making satisfactory progress, the director of graduate studies in the program and/or faculty adviser will recommend a face-to-face meeting between the student and the faculty adviser. If, after this meeting, the department/program and the student can agree on a plan to remedy the situation, the faculty adviser (or DGS) and the student will jointly sign a document enumerating steps to take. If, on the other hand, the department/program and the student disagree on issues of progress, the DGS or chair may send the student a letter placing the student on probation. Probation must last a minimum of 30 days.

The letter placing a student on probation must include an explicit

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statement of what must be accomplished and by what date in order for the student to be removed from probation and returned to good standing in the department/program. If the student does not comply with the conditions of probation, a letter (signed by the DGS) will be sent to the student with notification of dismissal from the degree program. Termination letters must inform the student of the right to appeal, first, to the department/program, and second, to the Graduate Faculty Senate. A copy of a termination letter must be sent to the graduate dean at the same time it is sent to the student.

Students have the right to appeal dismissal from their degree programs. As long as a student is in an appeal process, the student should maintain enrollment and continue working on degree program requirements. A student's first appeal of dismissal must be made to the department/program. If the student does not appeal, the Graduate School will send the student an official notice of dismissal from the program.

Students should notify their DGS in writing that they are appealing dismissal. A copy of the appeal letter addressed to the DGS should be sent to the graduate dean. Departments and programs organize their own appeals processes. If the department/program does not reverse its decision, the DGS will notify the Graduate School that the student has gone through the probationary period and the appeal process and has been dismissed.

Process of Appeals to the Graduate Faculty Senate

Students may appeal dismissal from a graduate degree program to the Graduate Faculty Senate. An appeal to the Graduate Faculty Senate can be made only after all internal appeals to a student's program/department have failed. The appeal must be based upon the program/department's failure to adhere to its or the Graduate School's published rules and regulations. A student wishing to appeal dismissal must send a letter addressed to the dean of the Graduate School within two weeks of dismissal.

Once the intent to appeal is received by the dean of the Graduate School, the following procedures will be followed:

1. The dean of the Graduate School or a representative will meet with the student to discuss the situation. If, after this meeting, the student

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wishes to make an appeal to the Graduate Faculty Senate, he or she will submit a statement to the Graduate School describing the basis of the appeal and containing any correspondence or other documentation relevant to the appeal. The graduate dean will notify the Graduate Faculty Senate, which will appoint an ad-hoc Appeal Committee consisting of five senators who are not members of the academic program involved in the appeal.

2. The Graduate School will provide information to the student, the department/program and members of the ad-hoc GFS Appeal Committee regarding the content, process and regulations/policies pertaining to the appeal. Upon compilation of the appeal file, the office of the graduate dean will send a copy of file materials to the members of the appeal committee and to the department/program. If the program/department wishes to respond in writing, its statement will be distributed to the appeal committee, the student and representatives from the Graduate School.

3. A hearing will be scheduled as soon as all parties can meet: the student (and an adviser from the university community, if desired), representatives from the department/program, the appeal committee and the Graduate School. At this hearing, the department or program will first invite the student making the appeal to present the case discussed in the written statement. The appeal committee may ask questions at this point, and once its questions have been answered, will give the program/department the opportunity to defend its dismissal of the student. Following further questions from the appeal committee, the hearing will be adjourned.

4. The appeal committee will meet to make a decision. This decision will be conveyed in writing to the student, the director of graduate studies and chairperson of the department or program, the graduate dean, the Graduate Faculty Senate president, and any other appropriate party named in the appeal.

To view this information (and related) policy information online, go to http://gradschool.missouri.edu/policies/progress/extension-appeal.php.

END OF SECTION

MU Graduate Application

Before applying to MU, prospective students are encouraged to carefully read the pertinent sections of this catalog regarding MU policies and degree requirements. These sections explain the types of graduate degrees, minors and certificates available from MU, minimum credit hours and grading, rate of progress, and timelines for degree completion. Before applying, a student should also understand other critical information in that same section, including requirements for residency, enrollment, committees, examinations, theses and dissertations, forms, leaves, and graduation.

PLEASE NOTE: The section on Graduate Degree Requirements and Policies describes the minimum degree requirements set forth by the MU Graduate School. Before applying, prospective students should also understand the additional graduation requirements established by an individual departments or degree programs of interest. Specific degree requirements and policies are available in the Degree Programs and Course Descriptions section of this catalog and on departmental Web pages.

Parallel Application Processes

Prospective students need to follow instructions carefully. First, they should understand that all applicants must concurrently apply to the MU Graduate School and the degree program of interest. For example, an applicant interested in a master's degree in Natural Resources will need to send application information to both the Graduate School and Natural Resources. Applicants must submit the forms and documents to the respective offices by the deadlines established by each entity. Application packets will be reviewed by both Graduate School and the degree program.

The following pages of the catalog provide the Graduate School's instructions for degree seeking, non-degree seeking, online, and other special categories of applicants. Another section, entitled Degree Program and Course Descriptions provides application instructions and deadlines for specific degree programs. Current MU undergraduate students should submit an Application for Change of Division Form in lieu of the Graduate Application for Admission.

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Online Application System Available

The Graduate School offers the option of online application. The online application should be submitted at least 10 days prior to the academic degree program's deadline. When applying to more than one degree program, a new (separate) online application must be submitted for each degree program in accordance with that department's deadlines and application requirements.

Special Note: Before an application is considered for review, the Graduate School must receive other required paper documents before the deadline. In other words, after the online submission form is complete, the student must send (via USPS or courier service) or hand deliver other supporting documents (e.g., credentials, official transcripts, test scores, reference letters) required by the Graduate School and degree program. The online application system has additional details for applicants. Again, the Graduate School application should be submitted at least 10 days prior to the degree program's deadline.

Application Fees

The non-refundable application processing fee is $45.00 US for U.S. Citizens and Permanent Residents and $60.00 US for Non-Resident Aliens (Internationals). To apply online, applicants must remit by a valid MasterCard, VISA, or Discover credit card. A few programs provide application fees under select circumstances. Please read your prospective degree program policies to learn more. The non-refundable fee is applicable for an entire academic year (three semesters).

OUT-OF-STATE APPLICANTS: It is the responsibility of applicants to apply and register under the proper residence, and to pay the correct tuition/fees. An informational pamphlet about tuition and residence rules may be obtained from the Residency Office.

Other MU fees may be found on the Cashier's Office web page.

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Financial Support Overview

Prospective graduate students may seek financial support for their studies from a variety of internal (funds within MU) and external (funds provided by other groups) sources. It is highly advisable to apply for financial support at the time of application to the University. Depending on the source, funds may be applied toward the costs of graduate education, such as tuition, fees, books, meals and housing.

The basic categories of student financial support are assistantships, fellowships, scholarships, travel support, grants, and loans—depending on source of support. U.S. Veterans are also eligible for financial support. Persons with disabilities should also explore potential resources. Some, but not all, sources of financial support include tuition waivers and student health insurance. Be sure to investigate a variety of potential sources. Please refer to the Financial Support of this catalog for detailed information on sources of support, application deadlines, and student obligations.

Questions about FINANCIAL AID should be directed to the Office of Student Financial Aid, 11 Jesse Hall, Columbia, MO 65211, (573) 882-7506 or in Missouri 1-800-225-6075.

Veteran's Benefits

The University of Missouri is approved for the certification of students eligible to receive educational assistance from the Department of Veterans Affairs. Information on the costs of education, financial aid, and required forms may be found at http://admissions.missouri.edu/costsandfinancialaid/veterans/.

Test Scores: The GRE, MAT, GMAT

Graduate applicants may be required to submit the general test scores of the Graduate Record Examination (GRE) or an appropriate alternative, nationally normed test such as the Miller's Analogies Test (MAT) or the Graduate Management Admission Test (GMAT). MU's individual graduate programs determine whether standardized test scores will be required for admission. Please check with your degree program of interest to determine if scores are required and to find out about their policy for applicants who do not submit required documents.

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If you are interested in applying for **nationally competitive fellowships and scholarships**, you need to know that GRE, MAT, or GMAT scores are often required as part of the application packet. Further, each fall the National Science Foundation provides funding for GRFP applicants to take GRE Subject Tests in eligible fields.

Make Certain Test Scores are Sent to Correct Address before Application Deadlines

When choosing a date to take the test, allow adequate time for test scores to be received before application deadlines. Test sites will not allow paper or other notes, so test takers must select the correct institution(s) and degree program(s) from a provided list. YOU MUST designate that your program of interest at the University of Missouri as locations to receive the GRE, MAT, and/or GMAT scores. For informational purposes:

- MU's Institutional Code for the GRE and TOEFL is: 6875.
- The Institutional Code for the Miller's Analogy Test is: 2138.

Before your degree program's application deadline, confirm that your test scores were received!

When Older GRE, MAT, or GMAT Scores are Permissible

Students who are applying to a doctoral program that requires the GRE and who have earned a master's degree may, at the discretion of the admitting academic program, present scores more than five years old. Students who do not have a master's degree must present scores that do not exceed five years. GRE score reporting policies have been adopted by the GRE Board relative to keeping and reporting GRE scores earned during the five-year period before the beginning of the current testing year. Current GRE Board policy, in effect since October 1985, states that scores are reportable for five years.

Suggestions for Test Takers. Before taking a test, learn all you can about the test and testing process from the official sites or trusted sources such as public universities. The test companies provide supplemental information for persons with disabilities. Study guides and practice tests are generally available at bookstores or online. Costs vary.

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Information on English Language Ability

All non-native English-speaking applicants are required to provide proof of English language ability. As proof, the University of Missouri Graduate School accepts scores from either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). TOEFL and IELTS scores are considered valid for two years beyond the test date. Required scores vary by academic program.

Exceptions: Areas Where English is a Primary Language.
Applicants from the following native English-speaking countries are not required to submit TOEFL or IELTS scores: Australia, New Zealand, British Caribbean Islands, Canada (except French-speaking areas), Ireland, Israel, United Kingdom, and Kenya.

Minimum Scores Required by the Graduate School and Academic Programs

The minimum total TOEFL scores for graduate admission to MU are 500 (paper-based test) or 61 (Internet-based test). The minimum total academic IELTS score for graduate admission to MU is 5.5. Please note that these are campuswide minimum scores; individual degree programs may require significantly higher scores for acceptance to particular graduate programs, and these requirements supersede the Graduate School's minimum. Please note that although an applicant might have fulfilled the above conditions for a TOEFL/IELTS waiver for admission by the Graduate School, each graduate degree program reserves the right to require an applicant to submit a TOEFL or IELTS score. Please check with your academic program of interest for the program's TOEFL/IELTS requirements.

Language Proficiency Test Waiver Policy

If the non-native English-speaking applicant has successfully completed one year of full-time post-secondary (college-level) study in a country where English is the native language within the past two years, then TOEFL or IELTS scores may be waived. One year of full-time enrollment is defined as completing the equivalent of at least 24 credit hours over 2 semesters at the undergraduate level or 18 credit hours over 2 semesters at the graduate level. English as a second language, intensive English, and/or remedial English courses cannot be included in the credit hour count.

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Language Requirement for Teaching Assistants and Graduate Instructors

If the degree program has offered you a financial package that includes a teaching assistantship or graduate instructorship, you will undergo additional English-language evaluation through the International Teaching Assistant Program. This evaluation happens after the admission process and will affect your ability to teach on the MU campus. The International Teaching Assistant Program staff provides courses and one-on-one sessions focusing on the necessary English-language and teaching skills for those who do not pass the initial evaluation.

Resources

Students who cannot meet the language proficiency requirement can enroll in the Intensive English Program at MU, which is designed to provide individuals as quickly as possible with the English-language skills necessary to successfully study for an academic degree at a college or university in the United States. Ask the director of graduate studies in your degree program of interest about this option.

MU Immunization Policy and Forms

Students who are officially admitted to on-campus programs at MU will also need to complete necessary health forms relative to Immunizations and Tuberculosis Screening. This information does not have to be submitted at time of application, but please be aware that students who are admitted to MU must complete and submit the Immunizations and Tuberculosis Screening form directly to MU Student Health before registering and enrolling in courses. A copy of one's immunization record must also be submitted with the completed form. For additional information please refer to the Student Health Center's Immunization Policy and Forms page.

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Key Terms to Know For Admissions

Terms such as application, admission, registration, and enrollment can often be confusing. Therefore, applicants will find it helpful to establish "working definitions" of what those – and other – terms mean at the University of Missouri.

Working Definition for Key Terms Used in the MU Graduate Application Process

Application – The processes whereby a prospective student submits a completed application forms and other required documents (e.g., transcripts, test scores, essays, reference letters) simultaneously to the MU Graduate School and to the department.

Fee – An application fee is the administrative surcharge for processing an application, payable to the Graduate School at time of application. Similarly, the university has other student fees.

Financial Support Applications – Students are advised to submit financial aid applications (e.g., for fellowships, scholarships, assistantships, loans) up to one year in advance of planned enrollment date. Deadlines vary depending on source.

Departmental Admission Criteria – Standards set forth by a department (or degree program) to evaluate students' eligibility to participate in a specific graduate degree area. Departmental admission criteria are unique and specific, and must be met in addition to the Graduate School's admission criteria.

Graduate School Admission Criteria – Minimum admission standards set forth by the Graduate Faculty Senate to evaluate students' general eligibility to participate in advanced studies at MU.

Admission to the University – If a student is accepted into a degree program and MU, the student will receive an official letter from the Graduate School offering admission to the university and telling the student what to do next.

Acceptance – A student must notify the department (and the Grad School) that the offer of admission has been accepted.

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Medical Requirements – Students who accept admittance must submit a health form and documentation directly to MU Student Health regarding immunizations and TB screening.

Acceptance of (MU) Financial Support – A student must officially accept financial support offered from the MU Graduate School (or department), including fellowships, scholarships, and assistantships.

Registration – The process by which a newly-admitted student completes forms, receives a student number, and obtains a student identification card. The process also includes enrollment courses each semester, which allows the student to access resources, like the libraries and computer labs.

Enrollment – Using an electronic system called myZou, a student selects courses and creates a semester schedule. Prior to course selection, consultation with faculty member or academic adviser is strongly encouraged.

END OF MU GRADUATE APPLICATION SECTION

Information for U.S. Veterans

MU Equity Office
The Uniformed Services Employment and Reemployment Rights Act (USERRA), which is enforced by the U.S. Department of Labor (DOL), prohibits employers from discriminating against employees or applicants for employment on the basis of their military status or military obligations. The offical University of Missouri equity statement for veterans may be found at http://equity.missouri.edu/learn/veterans.php

Veteran's Benefits
The University of Missouri is approved for the certification of students eligible to receive educational assistance from the Department of Veterans Affairs.

Information on the costs of education, financial aid, and required forms may be found at http://admissions.missouri.edu/costsAndFinancialAid/veterans/index.php.

Active Duty Policy
The Graduate School upholds the official University of Missouri policy on active duty, which may be found at http://admissions.missouri.edu/costsAndFinancialAid/veterans/activeDuty.php

Resources:
University of Missouri Veterans Center
veterans@missouri.edu
Lafferre Hall (Engineering Building)
573-884-4383 Office
573-884-4387 FAX

Mizzou Student Veterans Association
http://www.students.missouri.edu/~msva/

U.S. Department of Veterans Affairs - GI Bill Information
http://www.gibill.va.gov/GI_Bill_Info/rates.htm

END OF INFORMATION FOR U.S. VETERANS SECTION

Admission and Acceptance

As explained in the previous section about the Application Process, prospective students must submit required application forms and other documents for consideration by MU. The application packets are reviewed by the Graduate School and by the degree program of interest. This section explains how the application packets are processed at MU.

The Graduate School set minimum admission criteria for admission. Similarly, departments (or area and degree programs) set additional admission criteria. Student application packets are reviewed by both the Graduate School and by the department (or area and degree programs). As a result of these parallel review processes, a determination is made whether a student (a) is eligible for admission to the University or (b) is not eligible for admission to the University. Upon admittance, the student will receive an official letter from the MU Graduate School about the status of the application. Included with this letter will be a checklist for newly-admitted students. The instructions explain the next steps.

Acceptance of Admission

If a student is offered admission to the MU Graduate School, and the student intends to register and enroll, the student must officially accept the offer of admission.

Deadline for Acceptance of Financial Support

The University of Missouri is a signatory to the Council of Graduate Schools' policy regarding the offering and acceptance of financial aid. If a student is offered financial support, and the student intends to register and enroll, the student must officially accept the offer of financial support. Students are under no obligation to respond to offers of financial support for the coming academic year before April 15, but there are differences in how to proceed if the student later decides to decline the offer.

When a student accepts an offer of financial support before April 15, and subsequently desires to withdraw that acceptance, the student may submit in writing a resignation of the appointment at any time. However, if a student accepts the offer of financial support after April 15, the student cannot accept another offer of financial support without first obtaining a written release from the institution to which the fist commitment was made.

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Key Terms for the MU Graduate Admission Process

Departmental Admission Criteria –Standards set forth by a department (or degree program) to evaluate students' eligibility to participate in a specific graduate degree area. Departmental admission criteria are unique and specific, and must be met in addition to the Graduate School's admission criteria.

Graduate School Admission Criteria – Minimum admission standards set forth by the Graduate Faculty Senate to evaluate students' general eligibility to participate in advanced studies at MU.

Admission to the University – If a student is accepted into a degree program and MU, the student will receive an official letter from the Graduate School offering admission to the university and telling the student what to do next.

Acceptance – A student must notify the department (and the Graduate School) that the offer of admission has been accepted.

Medical Requirements – Students who accept admittance must submit a health form and documentation directly to MU Student Health regarding immunizations and TB screening.

Acceptance of (MU) Financial Support – A student must officially accept financial support offered from the MU Graduate School (or department), for example, a fellowship, scholarship, or assistantship.

END OF ADMISSION AND ACCEPTANCE SECTION

Registration and Enrollment

Overview

Prospective students must be admitted to MU to become eligible to register. Once a student is officially admitted, the University Registrar creates a student account and assigns a student number. Each student is granted access to an online work space in a database system called myZou. Students log into myZou with a personal identification nickname (called a "pawprint") and password. Students maintain account information in myZou, control privacy restrictions, obtain transcripts, and a variety of other functions. Each semester, students also use myZou to select courses and create a course schedule for the upcoming semester. Guests may learn more about the system on the myZou Project Overview page.

Full-Time Enrollment Status

Without special permission of the dean of the Graduate School, the maximum amount of credit hours to be taken in Graduate School is 16 each semester or nine for the summer session. Enrollment in nine hours in the fall and spring and four hours in the summer is considered full-time enrollment for graduate students.

Students enrolled in the "Graduate Examination" hours are not classified as full-time or part-time. Graduate students must be enrolled in at least nine credit hours to be considered full-time students and at least four credit hours to be considered half-time students during fall and spring terms. For summer terms, graduate students must be enrolled in four hours to be considered full-time and two hours to be considered half-time students.

Registering for Courses

Students register for courses and add and drop courses online via myZou.

Preregistration

Only actively enrolled students may complete registration for the upcoming semester during designated preregistration dates in October and April. New students may preregister for the fall semester at designated times between mid-June to early-July.

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Fees

Please consult the Cashier's Office for required and optional fees associated with registration and enrollment, and during enrollment status changes.

Registration for Professional Engineers

The Revised Statutes of Missouri (Section 327.221) require that "all applicants for registration as a professional engineer in the State of Missouri after Jan. 1, 1977, be a graduate of and hold a degree in engineering in a curriculum accredited by the Accreditation Board for Engineering and Technology (ABET)." All MU undergraduate engineering bachelor's-level programs in engineering are so accredited. Applicants who receive advanced degrees in MU's engineering programs but who do not have a bachelor's degree in an accredited engineering program are not eligible for registration in Missouri. Candidates for a graduate degree (MS or PhD) in engineering who want to establish eligibility for registration should consult with their academic program chair about a plan of study that also will lead to a bachelor's degree in an ABET-accredited program. Further information about professional engineering registration may also be obtained from the Missouri Board for Architects, Professional Engineers and Land Surveyors, P.O. Box 184, Jefferson City, MO 65102.

Auditing Courses

Students who wish to attend lectures are expected to enroll and pay fees as a "hearer." The status of hearer does not entitle a veteran to a subsistence allowance.

Enrollment Requirements for Master's and Educational Specialist Degree Candidates

After completing courses, students expecting to take examinations, present a thesis, manuscript, project, or portfolio must be enrolled when that activity occurs. If a master's and educational specialist candidate only needs to take exams or defend a thesis or project, the candidate can enroll for "Graduate Examination" hours in myZou.

Registration in the "Graduate Examination" does not count toward enrollment certification. Students enrolled in the "Graduate Examination" would not be considered full-time or part-time. If students need to use the library or computers on campus, they should enroll in at least one hour of regular credit hour instead of "Graduate Examination".

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Students with financial aid should check with the Student Financial Aid office before registering for the Graduate Examination option. Failure to do so could cause serious consequences for the student's financial aid status.

International students must check with the International Center before registering for the Graduate Examination option. Failure to do so could cause serious consequences for the student's visa status.

Enrollment Requirements for Doctoral Candidates
Candidacy for a doctoral degree is established by passing the comprehensive examination. Status as a continuous enrollment doctoral student begins the term after the term in which the comprehensive exam was successfully completed.

Key Terms

Registration: The process by which a newly-admitted student completes forms, receives a student number, and obtains a student identification card. The process also includes enrollment in courses each semester, which allows the student to access resources, like the libraries and computer labs.

Enrollment: Using an electronic system called myZou, a student selects courses and creates a semester schedule. Prior to course selection, consultation with faculty member or academic adviser is strongly encouraged.

END OF REGISTRATION AND ENROLLMENT DESCRIPTION

Leaves of Absence Policies and Procedures

Contact adviser and director of graduate studies
Students considering a leave of absence that will result in a break in enrollment of one or more semesters must first contact the graduate adviser and the academic degree program's director of graduate studies to inform them of their intent, the reason for requesting leave and the expected duration.

Contact Graduate School: After leave approval by the academic program, the director of graduate studies and the student will submit letters to the dean of the Graduate School. The DGS letter will verify that the academic program has been informed and that a leave of absence has been approved. The letter from the student will provide an explanation for the request as well as the anticipated departure and return date.

Resolve Financial Support Responsibilities: It is the responsibility of students to resolve all issues pertaining to their support (e.g., research or teaching assistantship, scholarship) with their adviser or other relevant authority before departure. These issues include the date when support will be terminated and whether or under what conditions the student will be reinstated for support upon their return.

Impact of a Leave on the Extension of Degree Time and Continuous Enrollment: Time spent on leave does not automatically extend limits for completion of the graduate degree but can be considered in a request for an extension.

Impact of a Leave on Graduate Assistants, Fellows and Instructors: Doctoral students who are required to maintain continuous enrollment may petition for an exception to this policy while they are on an approved Leave of Absence. Refer to the Graduate School's Web pages. For additional information on leaves of absence for a graduate assistants, instructors and fellows.

Additional Instructions for International Students: International students in F-1 and J-1 non-immigrant status must also obtain authorization from

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the International Center before the initiation of a Leave of Absence and before returning to campus to ensure compliance with current SEVIS regulations and visa restrictions. F-1 and J-1 students approved for a leave of absence may not remain in the United States during the leave period unless authorized by the International Center. For students who must depart the United States, leave periods exceeding five months will necessitate updated student immigration documentation for re-entry. All international students considering a leave of absence should meet with an international student adviser to determine the appropriate steps to safeguard their immigration status.

Notification for Re-Entry
Before the completion of the Leave of Absence, the student must notify the academic program's director of graduate studies and the Graduate School so that the re-entry process can be initiated.

Contact with the University During Leave
Students on a Leave of Absence may not make significant use of University resources and services or engage in significant consultation with the faculty.

Withdrawal from the University
Formal withdrawal from MU is arranged through the Graduate School using a Notice of Withdrawal form that is signed by the adviser and the dean of the Graduate School.

Grades at the time of Withdrawal: If the student has earned a C or better at withdrawal time, a grade of W is recorded. If the student is failing at withdrawal time, a grade of F is recorded. Students are responsible for notifying their instructors of their intention to withdraw and for determining if their work qualifies for a W grade. Students who leave MU without filing a statement of formal withdrawal are given a grade of F in all courses.

Withdrawal Due to an Urgent Situation (Other than Active Duty): If the reason for leaving is so urgent that an official withdrawal cannot be obtained, the student should notify the Graduate School as soon as possible and officially request to be withdrawn.

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Key Terms Concerning Leaves of Absence & Withdrawal

Leave of Absence
The student anticipates a need to discontinue enrollment for one or more semesters.

Withdrawal
The student needs to halt the pursuit of a graduate degree and does not anticipate returning to MU.

Active Duty Leave or Withdrawal
Students who are members of the US Military (e.g., Reserve or National Guard) may be called into active duty by the government. As a result of the assignment, the student may need to request an active duty leave or may decide to withdraw from the University.

END OF LEAVES OF ABSENCE POLICIES AND PROCEDURES SECTION

Academic Integrity and Professional Ethics

The University of Missouri upholds the principles of academic integrity, intellectual pluralism, and the responsible conduct of research within and across disciplines. As described in the Notices, rights to privacy, nondiscrimination, and ADA accommodations are strictly enforced. Ethics is truly the cornerstone of MU graduate education—from advising to teaching and research. These grounding principles hold fast across campus (i.e., offices, classrooms, laboratories, and centers) within and across disciplines.

Key resources for graduate and professional students include the Responsible Conduct of Research Program. MU is a partner of the national Responsible Conduct of Research Program, sponsored by the Council of Graduate Schools and Office of Research Integrity. At MU, students can enroll in RCR courses and earn a dean's certificate. Departments across campus offer courses on disciplinary and interdisciplinary ethics.

The MU Office of Research is a gateway for information for students and faculty on human subject research, Institutional Review Board (IRB) certification, conflict of interest, compliance, investigator responsibilities, technology transfer, export controls and a variety of other critical information for MU researchers. The Campus IRB Web page should be reviewed by all masters and doctoral students prior to engaging in any type of research or evaluation with human beings or animals.

Another resource is the Office of Student Rights and Responsibilities, which offers information on intellectual pluralism and academic integrity. The University of Missouri collected rules may be found in Chapter 200: Standard of Conduct.

Adherence to Academic Regulations and Guidelines

It is each graduate student's responsibility to learn and adhere to all academic and research regulations and procedures. A student cannot "plead ignorance," or contend that he or she was not informed of the regulations and procedures. When studying and conducting research

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in the US, international students must learn and adhere to MU campus regulations and procedures. Responsibility for following all policies and meeting all requirements and deadlines for graduate programs rests with the student.

Academic Integrity & Professional Ethics

Academic honesty is essential to the intellectual life of the University. Work—be it art, writing, or research—must be original. It is a grievous violation of the University of Missouri policies to claim or use another person's answers, words, ideas or research findings as one's one work. In addition to acts of cheating or plagiarism, any unauthorized possession of examinations, hiding of source materials or tampering with grade records are acts of academic dishonesty specifically forbidden by University rules. Students who are found guilty of academic dishonesty may be dismissed from the University. The MU Campus Writing Program defines plagiarism and explains to students how to avoid it. Because guidelines vary across countries, it is highly recommended that all MU students learn the correct methods for citing sources and attributing the work of others. Additional resources on academic integrity are offered by the Office of Student Rights and Responsibilities.

Reporting Dishonesty

Instructors (postdoctoral associates and graduate assistants in teaching positions, instructors and other teaching staff) must notify students of their intention to report a suspected incident of academic misconduct within ten calendar days of detecting the incident. Instructors should report, using Option A or Option B, the circumstances and academic assessment impact of any suspected acts of academic dishonesty to the provost's office as soon as possible after notifying the student, but in no case longer than fourteen calendar days after notifying the student. The provost's office will copy the report to the course department chair, the student's divisional dean and the divisional dean of the course, and contact the student.

Option A - Discussion Agreement

Instructors have the option to discuss the specific allegation with the student. If the instructor and student agree on a sanction (e.g., reduction in course grade, failing course grade, assignment of additional work),

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no disciplinary action will be taken by the provost's office as a result of this specific act alone. If, however, this specific act represents the student's second or greater instance of academic dishonesty, the provost's office may choose disciplinary sanctions (e.g., suspension, dismissal). Instructors must indicate on the form if no agreement was reached by the instructor and the student.

In all cases, the form, and relevant materials must be forwarded to the provost's office for evaluation.

Option B - Academic Integrity Violation Report
If the instructor chooses not to complete a discussion agreement, he or she must nonetheless notify the student, complete the academic integrity violation report, attach relevant materials, and forward this information to the Provost's office.

Regardless of the option used, instructors may award a failing grade on the assignment, a failing grade in the course, or otherwise adjust the assignment or course grade as deemed appropriate. In addition, instructors may choose to assign additional work.

Students wishing to appeal a course grade should follow the grade appeal process, described in Article VII of the Faculty Handbook and included in the M-Book. Forms are available from the provost's office.

Because of the importance of honesty to academic and professional life, acts of dishonesty by graduate students may result in suspension or dismissal from the university.

Discipline Specific Codes of Ethics
Graduate students also should be aware that most professional associations have codes of ethics. These codes vary considerably across fields, but tend to provide guidelines for a broad array of professional responsibilities including teaching, research and working with clients. Violations of a code of ethics can lead to negative sanctions by one's professional colleagues and the expulsion from the professional associations in one's field. Graduate students are encouraged to obtain copies of codes of ethics for their chosen profession from the director of graduate studies in their department or program.

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Intimate Relationships with Graduate Students

Sexual harassment or amorous relationships between members of the profession and any student for whom he or she has a professional responsibility should be avoided. This applies to any supervisor relationship between professors and graduate assistants, graduate and undergraduate students, as well as graduate assistants with students they teach or supervise. Implicit in the idea of professionalism is the recognition by those in positions of authority that in their relationships with their students there is always an element of power. It is incumbent upon members of the profession not to abuse, nor seem to abuse the power with which they are entrusted, since relationships between members of the profession and their students are quite imbalanced. Such relationships may have the effect of undermining the atmosphere of trust among students and faculty on which the educational process depends.

This document was approved for distribution on January 23, 2001, by the University of Missouri Graduate Faculty Senate.

END OF ACADEMIC INTEGRITY AND PROFESSIONAL ETHICS SECTION.

Best Practice in Graduate Education

At MU, graduate students build their capacity for stellar scholarship, independent judgment, academic rigor, original work, and intellectual honesty. To this end, it is the shared responsibility of faculty and students to work together to foster ethical partnerships which encourage freedom of inquiry and demonstrate mutual respect and personal and professional integrity.

Advisers, Committees and the Graduate Experience

Graduate student progress toward educational goals at MU is directed by an adviser in consultation with the student's graduate committee. The adviser and the individuals on the committee provide intellectual guidance in support of the scholarly/creative activities of graduate students. The adviser and committee members also are charged with the responsibility of evaluating a graduate student's performance in scholarly and creative activities. The graduate student, the adviser and committee members compose the basic unit of graduate education at an institution. It is the quality, breadth and depth of interaction within this unit that largely determines the outcome of the graduate experience.

A Community Based on Ethics

High quality graduate education depends upon the professional and ethical conduct of the participants. Academic program directors of graduate studies, faculty members and graduate students have complementary responsibilities in the maintenance of academic standards and the creation of a high quality graduate program. Excellence in graduate education is achieved when both faculty and students are highly motivated, possess the academic and professional backgrounds necessary to perform at the highest level, and are sincere in their desire to see each other succeed.

MU's Academic Environment of Professionalism and Reciprocity: Graduate Students

MU graduate students are the next generation of work force professionals. Thus, it is essential for graduate students to learn how to conduct themselves in a mature, professional, ethical and civil manner in all interactions with faculty, staff, and other students, in accordance

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with the accepted standards of the discipline and MU policies governing discrimination and harassment. Further, graduate students must recognize that faculty and staff have many professional responsibilities in addition to graduate education.

Graduate students must understand that the faculty adviser provides the intellectual and instructional environment in which the student prepares a plan of study, may be involved with research, and that he or she may, through access to teaching and research funds, also provide the student with financial support. Because faculty must report on their advisees' progress, students must expect that their research results, with appropriate recognition, may be incorporated into progress reports, summary documents, applications for continuation for funding, and similar documents authored by the faculty adviser, to the extent that the student's research is related to the faculty adviser's research program and the grants which support that research.

Further, graduate students must recognize that faculty members have broad discretion to allocate their own time and other resources in ways that are academically productive. The faculty adviser is responsible for monitoring the accuracy, creativity, validity and integrity of the student's research. Careful, well-conceived research reflects favorably on the student, the faculty adviser, the degree program and MU.

Graduate students must exercise the highest integrity in taking examinations; completing master's and doctoral projects; and collecting, analyzing and presenting research data in theses, dissertations and presentations. As applicable to the student's degree program, students must acknowledge the contributions of the faculty adviser and other members of the research team to the student's work in all publications and conference presentations; acknowledgment may mean co-authorship when that is appropriate. In some disciplines, the faculty adviser will determine when a body of work is ready for publication, exhibition or performance and will determine an acceptable venue because the faculty adviser bears responsibility for overseeing the performance of the student and ensuring the validity of any applicable research.

Because the graduate student is in a privileged position, he or she must maintain the confidentiality of the faculty adviser's professional

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activities and research before presentations or publication, in accordance with existing practices and policies of the discipline. The student must take primary responsibility to become informed of regulations and policies governing their graduate studies at MU.

MU's Academic Environment of Professionalism and Reciprocity: Faculty
Correspondingly, it is imperative that faculty interact with students in a professional and civil manner in accordance with the accepted standards of the discipline and the University of Missouri policies governing discrimination and harassment. In keeping with those standards, faculty will impartially evaluate student performance regardless of religion, race, gender, sexual orientation, nationality or other criteria that are not germane to academic evaluation. Similarly, faculty members will serve on graduate student committees without regard to the religion, race, gender, sexual orientation or nationality of the graduate student. Familiarity with policies that affect their graduate students is critical.

Faculty members also strive to prevent intellectual or personal rivalries among colleagues from interfering with their duties as graduate advisers, committee members, directors of graduate studies or colleagues. Faculty excuse themselves from serving as advisers on graduate committees or supervising assistantship work when there is a familial or other relationship between the faculty member and the student that could result in a conflict of interest. Faculty members also refrain from requesting students to do personal work (mowing lawns, baby-sitting, typing papers, etc.) with or without appropriate compensation.

With graduate students, faculty members discuss laboratory, academic program and authorship policy in advance of entering into collaborative projects. They also ensure an absence of coercion with regard to the participation of graduate students as human research subjects in their faculty advisers' research. It is incumbent upon faculty to acknowledge any student contributions to research and/or creative activity presented at conferences, in professional publications or in applications for copyrights and patents. Further, a faculty member will not impede a graduate student's progress and completion of his or her degree in order to benefit from the student's proficiency as a teaching or research assistant.

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MU faculty members take pride in providing supervisory relationships and stimulating environments in the classroom, lab or studio, that foster students' creatively, inquiry, and self-reliance. Faculty also have a clear understanding with their graduate students about their specific academic, creative activity and/or research responsibilities, including time lines for completion of comprehensive examinations, research and the thesis or dissertation, as applicable. In a timely fashion, faculty members provide oral and written comments and evaluations of each student's work and progress toward degree completion. They also assist the director of graduate studies in an annual review of each graduate student's progress.

Working as a Team: Graduate Students and Their Advisers

Graduate education is structured upon the generation and transmission of knowledge at the highest level. In many cases, graduate students depend on faculty advisers to assist them in identifying and gaining access to financial and/or intellectual resources that support their graduate programs. In addition, faculty advisers and academic program administrators must apprise students of the job market so that students can develop realistic expectations for the outcomes of their studies. In some academic units the student's specific adviser may change during the course of the student's program, either because of faculty or student wishes. The academic advising role may be extended to professional (career) mentoring relationship. The reward of finding a faculty adviser implies that the student has achieved a level of excellence and sophistication in the field or exhibits sufficient promise to merit the more intensive interest, instruction and counsel of faculty.

To have a successful student-adviser relationship, it is important that graduate students devote an appropriate amount of time and energy toward achieving academic excellence and earning the advanced degree. Students should be aware of time constraints and other demands imposed on faculty members and program staff.

Successful graduate students take the initiative to ask questions that promote understanding of the academic subjects and advances in the field. They communicate regularly with faculty advisers, especially in matters related to research and progress within the graduate program and with any teaching responsibilities.

Correspondingly, faculty advisers provide clear maps of all requirements each student must meet, including course work, languages, research

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tools, examinations, and thesis or dissertation, teaching/laboratory assistantships, and delineating the amount of time expected to complete each step. They also evaluate student progress and performance in regular and informative ways consistent with the practice in the field. Faculty are the experts and leaders who help students develop interpretive, writing, oral and quantitative skills, in accordance with the expectations of the discipline and the specific degree program. They assist graduate students in the development of grant writing skills, where appropriate, and take reasonable measures to ensure that graduate students who initiate thesis or dissertation research/creative activity do so in a timely fashion, regardless of the overall demands of assistantships in the laboratory, studio, or classroom.

When deemed appropriate by the faculty member, she or he will encourage graduate students to participate in professional meetings or display their work in public forums and exhibitions. Faculty also stimulate in each graduate student an appreciation of professional skills they will be required to master in their respective disciplines, (i.e., teaching, administration, research, writing and creativity). Importantly, faculty members also create an ethos of collegiality so that learning takes place within a community of scholars. They prepare students to be competitive for employment, which includes portraying a realistic view of the field and the job market and making use of professional contacts and associations for the benefit of their students, as appropriate. In this learning environment of high ethical standards, faculty members insist that students behave ethically in all their professional activities. They also discuss risks that students might encounter while participating in research activities and exert reasonable effort to minimize risks.

Faculty Members

Faculty advisers are encouraged to consult the following resources for assistance:

- MU Institutional Review Board
- Environmental Health and Safety (radiation safety, chemical safety, biological safety, environmental issues, etc.)
- Institutional Biosafety Committee (reviews, approves and oversees all research and teaching activities involving recombinant DNA and biohazardous materials in human, animal, plant and laboratory (in vitro) use)

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- MU International Center (Information on safety and travel to international destinations)
- MU Student Health
- Center for Disease Control and Prevention
- U.S. Department of State Current Travel Warnings

Within academic units, faculty advisers support the academic promise of graduate students in their programs. In some cases, academic advisers are assigned to entering graduate students to assist them in academic advising and other matters. In other cases, students select faculty advisers in accordance with the disciplinary interest or research expertise of faculty. Advising is variant in its scope and breadth and may be accomplished in many ways.

A student's academic performance and a faculty member's scholarly interest may coincide during the course of instruction and research/ creative activity/performance. As the faculty-graduate student relationship matures and intensifies, direct collaborations may involve the sharing of authorship or right to intellectual property developed in research or other creative activity. Such collaborations are encouraged and are a desired outcome of the mentoring process.

Faculty-Student Communication
It is understood that the standards of mentoring may differ by academic program, depending on the degrees students are pursuing and the availability of time working professionals in communities outside Columbia have to consult with their advisers. Nevertheless, it is recommended that advisement, consultation and mentoring be nurtured via electronic means (e.g., e-mail, BlackBoard™, listservs, videoconference) if they cannot be nurtured in person. At the least, advisers and their students will communicate annually through the Graduate Student Progress System.

Changes in Advisers and Committees
It is further understood that academic programs will establish appropriate policies and practices to assist students whose major adviser is no longer able to serve in that capacity, as well as students who need additions or deletions to their committees. At the same time, academic programs whose funding of graduate students is generated primarily from research grants need to work with faculty advisers

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and their graduate students to ensure that students understand the importance of completing their research commitments.

END OF BEST PRACTICE IN GRADUATE EDUCATION SECTION

MU Professional and Graduate Student Organizations

ACES (Alternative Career Exploration in the Sciences)

http://aces.missouri.edu/

ACES is a graduate student organization focused on providing career development services for graduate students and postdoctoral associates in the life sciences.

Association of Black Graduate and Professional Students

http://www.students.missouri.edu/~abgps/

As an organization, ABGPS seeks to assist in monitoring the academic progress of Black graduate and professional students, as well as supply them with information to promote a more positive experience at MU.

Graduate Professional Council

http://www.students.missouri.edu/~gpc/

Similar to GSA, the GPC also represents the interests of students in the schools of Business and Public Affairs, Law, Medicine and Veterinary Medicine. GPC is a voice for graduate/professional students.

Graduate Student Association

http://gsa.missouri.edu/

GSA at MU is an organization dedicated to representing the interests and needs of graduate students to the faculty, supporting graduate students through funding (travel grants), supporting special projects and organizing social events for graduate students.

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Missouri International Student Council

http://misc.missouri.edu/

Missouri International Student Council is a student organization at MU that works in collaboration with other cultural student organizations to globalize The University of Missouri through the volunteerism of international student communities.

NEXUS

http://nga.missouri.edu

NEXUS is the graduate student minority science network at MU. This organization brings together underrepresented groups for professional development and networking. Events include a monthly meeting and a monthly social event.

END OF STUDENT ORGANIZATION DESCRIPTIONS

Course Abbreviations

ACCY	Accounting
AG EC	Agricultural Economics
AG ED	Agricultural Education
AG S M	Agricultural Systems Management
AGRIC	Agriculture
AN SCI	Animal Science
ANTHRO	Anthropology
ARCHST	Architectural Studies
ART	Art
AR H A	Art History and Archaeology
ASTRON	Astronomy
ATM SC	Atmospheric Science
BIOCHM	Biochemistry
BIOL EN	Biological Engineering
BIO SC	Biological Sciences
BIOMED	Biomedical Sciences
BL STU	Black Studies
BUS AD	Business Administration
CH ENG	Chemical Engineering
CHEM	Chemistry
CV ENG	Civil Engineering
CL	Classical Humanities
CLASS	Classics
COMMUN	Communication
C S D	Communication Sciences and Disorders Program
CMP SC	Computer Science
DMU	Diagnostic Medical Ultrasound
ECONOM	Economics
ED LPA	Educational Leadership and Policy Analysis
ESC PS	Educational, School and Counseling Psychology
ECE	Electrical and Computer Engineering
ENGLSH	English
ENTOM	Entomology
ENV SC	Environmental Science
ENV ST	Environmental Studies
F C MD	Family and Community Medicine
FILM S	Film Studies

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FINANC	Finance
FINPLN	Financial Planning
F W	Fisheries and Wildlife
FS	Food Science
FOREST	Forestry
FRENCH	French
GEOG	Geography
GEOL	Geological Sciences
GERMAN	German
GRAD	Graduate School
GREEK	Greek
HMI	Health Management and Informatics
HTH PR	Health Professions
HIST	History
H D FS	Human Development and Family Studies
IMSE	Industrial and Manufacturing Systems Engineering
INFO INST	Informatics institute
IS LT	Information Sciences and Learning Technology
JOURN	Journalism
LAB ST	Labor Studies
LAB AN	Laboratory Animal Medicine
LATIN	Latin
LAW	Law
LINGST	Linguistics
LTC	Learning, Teaching, & Curriculum
LTC V	Learning, Teaching, & Curriculum - Vocational
MANGMT	Management
MRKTNG	Marketing
MATH	Mathematics
MAE	Mechanical and Aerospace Engineering
MPP	Medical Pharmacology and Physiology
MICROB	Molecular Microbiology and Immunology
MUS	Music
MUSIC	Music
NAT R	Natural Resources
NEURO SC	IIntegrative Neuro Science
NU ENG	Nuclear Engineering
NUCMED	Nuclear Medicine
NURSE	Nursing
NUTRIT	Nutrition

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NUTR S	Nutritional Sciences
OC THR	Occupational Therapy
P HLTH	Public Health
P R TR	Parks, Recreation and Tourism
PEA ST	Peace Studies
PHIL	Philosophy
PH THR	Physical Therapy
PHYSCS	Physics
PL PTH	Plant Microbiology and Pathology
PLNT S	Plant Science
POL SC	Political Science
PSYCH	Psychology
PTH AS	Pathology and Anatomical Sciences
PUB AF	Public Affairs
RA SCI	Radiological Sciences
RADIOL	Radiology
REL ST	Religious Studies
RS THR	Respiratory Therapy
RM LAN	Romance Languages and Literatures
RU SOC	Rural Sociology
RUSS	Russian
SOC WK	Social Work
SOCIOL	Sociology
SOIL	Soil Science
S A ST	South Asia Studies
SPAN	Spanish
SPC ED	Special Education
STAT	Statistics
ST ABRD	Study Abroad
TDP	Teacher Development Program
T A M	Textile and Apparel Management
THEATR	Theatre
V BSCI	Veterinary Biomedical Science
V M S	Veterinary Medicine and Surgery
V PBIO	Veterinary Pathobiology
WGST	Women's and Gender Studies

END OF COURSE ABBREVIATIONS SECTION

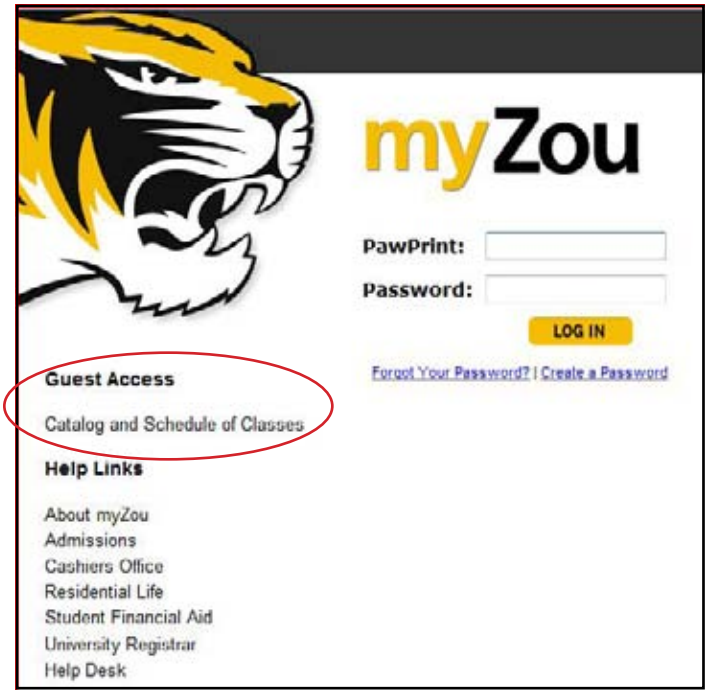
What is myZou?

The myZou online system is a self service center for MU student records, grades, course enrollment and tuition payments. Located at https://myzou.missouri.edu/psp/prd/?cmd=login, myZou also houses official course information for both graduate and undergraduate students.

How to View (Browse) Official MU Course Descriptions

Step 1

Prospective students and Web site visitors: View official course descriptions through myZou's **Guest Access** link.



To browse the course catalog, go to https://myzou.missouri.edu. Look for **Guest Access** on the left side of the page below the Tiger. Click on the underlined words "Catalog and Schedule of Classes."

Current students: Login to myZou with your MU pawprint (ID) and password. Click on the "Self Service" link in the left column. In the middle of the screen, select Class Search/Browse Catalog.

Step 2

The next page is called Class Search. On the pull down menu, select an upcoming semester. Next, click the circle that says "Browse Catalog." Then click the "GO" button.

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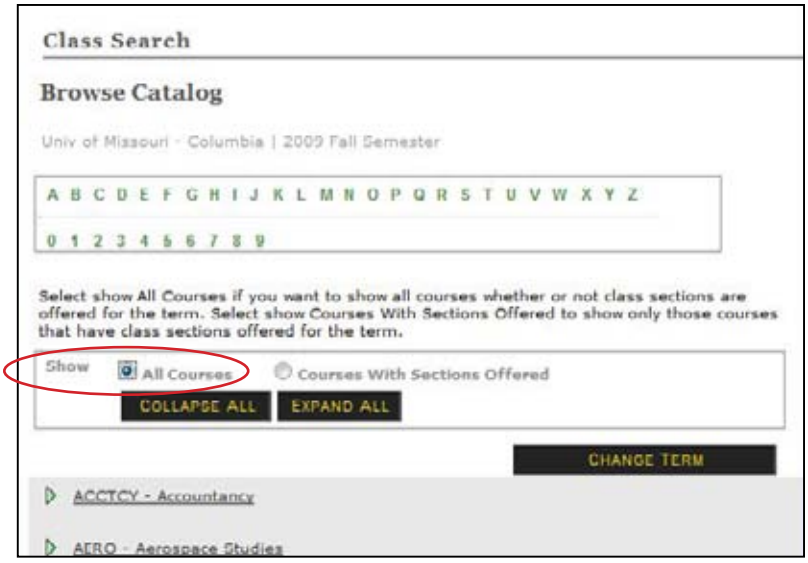
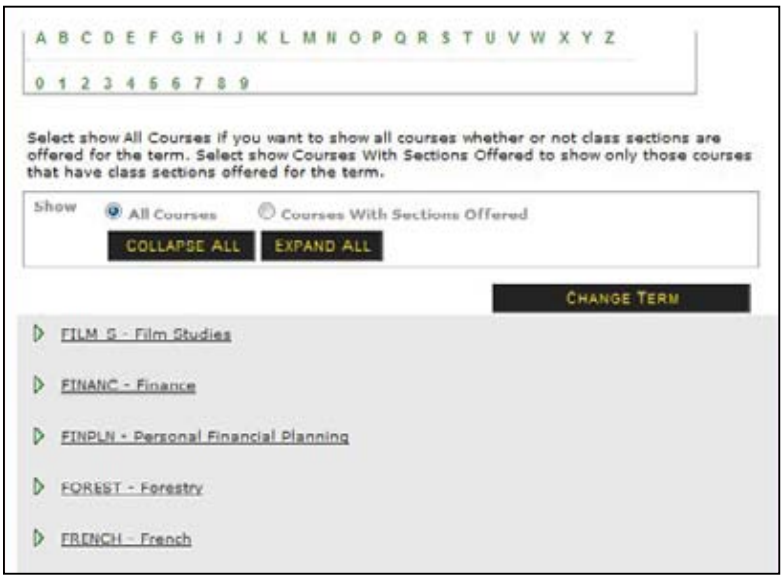
Step 3

You should be on the **Browse Catalog** subpage for the selected semester, showing a box with the alphabet. *Before* clicking on a letter, go to the second box that says "Show." Click the circle for "All Courses." Wait for the system to process. Now click on a letter of the alphabet that corresponds to an area of interest.



Example: If you are interested in Forestry courses, click on the letter "F." You will get a list of all courses that begin with "F."



Step 4

You will now be viewing a list of programs based on the letter you selected. Scroll down the page. Click on a program of interest.

A new screen opens with three columns: Course Number, Description and Course Action. **Course titles** are listed under Description. If the last column reads "No Sections Available," it simply means that the course is not offered during the semester you selected. However, if that

Course Number	Description	Action
3212	Forest Health and Protection	No Sections Available
3290	Urban Forestry	View Class Sections
3300	Problems in Forestry	View Class Sections
3350	Special Readings in Forestry	View Class Sections
4301	Topics in Forestry	View Class Sections
4330	Practice of Silviculture	View Class Sections
4350	Forest Economics	View Class Sections
4365	Logging Systems: Operations and Analyses	No Sections Available
4370	Wildland Fire Management	View Class Sections
4375	Forest Stand Dynamics	No Sections Available

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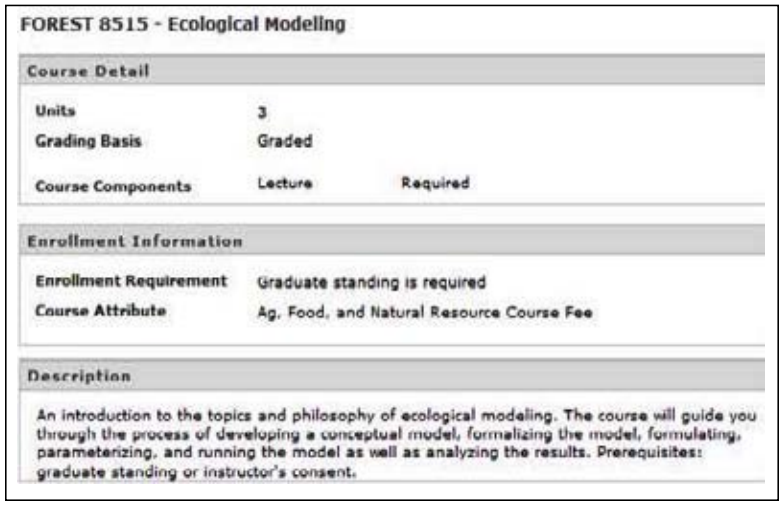
column reads "View Class Sections," it means that the course *is* offered during the semester you selected.

Step 5


FOREST 8515 - Ecological Modeling

Course Detail

Units	3	
Grading Basis	Graded	
Course Components	Lecture	Required

Enrollment Information

Enrollment Requirement	Graduate standing is required
Course Attribute	Ag, Food, and Natural Resource Course Fee

Description

An introduction to the topics and philosophy of ecological modeling. The course will guide you through the process of developing a conceptual model, formalizing the model, formulating, parameterizing, and running the model as well as analyzing the results. Prerequisites: graduate standing or instructor's consent.

Scroll down the list of courses to those at the **graduate level** (normally numbered 5000 – 9999; see next section on Course Numbering). Click on the underlined course title (under the Description column) to read the offical course information and requirements. Another page will open with the official course description, enrollment information and course details.

Important

Before enrolling in courses, students must consult with the graduate degree program office, the director of graduate study in a degree area, or a primary thesis or dissertation advisor. As part of that process, all students develop a "plan of study" which is approved by the degree program. The plan of study looks ahead at all of the courses (e.g., prerequisite, core, optional) required to complete a degree. Since some courses are offered on a rotating basis, it is important to know when a given course will be offered. Be sure to ask!

END OF MYZOU ONLINE SYSTEM SECTION

Course Numbering System

Effective fall 2004, the University of Missouri implemented a four digit course numbering system. Undergraduate courses are numbered 0000-4999. A PDF version of the undergraduate catalog may be found at http://registrar.missouri.edu/degrees-catalogs/2008-2010/index.php.

Graduate and professional level courses are numbered as follows:

- Professional-level courses are numbered 5000-6999. These numbers are reserved for use in the Medical, Law and Veterinary schools' catalogs.
- Graduate-level courses are numbered 7000-7999 (beginning level courses); 8000-8999 (mid-level courses); and 9000-9999 (upper-level courses).

Research courses (490) were renumbered in 2003 as follows:

- Masters Thesis Research 8090 (8990 in the College of Engineering).
- Doctoral Dissertation Research 9090 (9990 in the College of Engineering.

Note: Effective Winter Semester 1994, thesis and research hours (490) are graded on an S/U basis only.

Cross-level Courses

In some cases, a course may be open to both undergraduate and graduate students, although completion requirements and credit hours may vary. The course descriptions will be cross listed with a number between 4000-4999 for undergraduates and 7000-7999 for graduate students.

END OF COURSE NUMBERING SYSTEM SECTION

Graduate Programs List

Each listing is a link to the degree program, minor, or certificate within this catalog. Use the left and right arrows at the bottom of each page to navigate, and use this Programs List page to jump from program area to program area.

Please read each program entry completely; critical information concerning the degree, minor or certificate may be on the next page.

Please only print the pages you need by using "Page Range" in your Print Menu.

Click for more information about Graduate Academic Minors (Web link).

Click for more information about Graduate Certificates (Web link).

Click for a list of Course Abbreviations.

Click to learn how to locate courses in the myZou online system.

Click to learn about MU's course numbering system.

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Animal Sciences

Anthropology

Architectural Studies

Art: Master of Fine Arts

Art History and Archaeology

Astronomy - see Physics and Astronomy

Biochemistry

Biological Sciences

Biomedical Sciences Graduate Programs (MS, Dual Degrees)

- Emphasis Area: Biomedical Sciences (MS)
- Emphasis Area: Comparative Medicine (MS)
- Emphasis Area: Pathobiology (MS)
- Emphasis Area: Veterinary Medicine and Surgery (MS)

Biomedical Sciences Area Program (PhD) - see Pathobiology Area Program Doctorate

Black Studies Graduate Minor

Business (Management, Marketing, and Finance) and Accountancy

Canadian Studies

Center for the Digital Globe Graduate Certificate

continued on next page

Chemistry

Classical Studies

College Teaching: Minor in College Teaching

Communication

Communication Science & Disorders

Community Processes Graduate Certificate

Conservation Biology Graduate Certificate (Web link)

Designated Minor in Law for Journalism Doctoral Students

Diagnostic Medical Ultrasound (MHS)

Dispute Resolution Master of Law (LLM) Degree

Distance degrees - see MU Direct

Economics

Education

- Educational Leadership & Policy Analysis
- Educational, School and Counseling Psychology
- Information Science & Learning Technologies
- Learning, Teaching and Curriculum
- Special Education
- Teaching Fellowship Program (M Ed)

continued on next page

Engineering

- Biological Engineering
- Chemical Engineering
- Civil and Environmental Engineering
- Computer Science (Information Technology)
- Electrical and Computer Engineering
- Industrial & Manufacturing Systems Engineering
- Master of Engineering (ME)
- Mechanical & Aerospace Engineering
- Nuclear Engineering

English

Film Studies

Financial Planning - see MU Direct

Fisheries and Wildlife Sciences

Food Safety and Defense Graduate Certificate (Web link)

Food Science

Forestry

French - see Romance Languages & Literatures

continued on next page

Genetics Area Program Doctorate

Geographic Information Science Graduate Certificate (Web link)

Geography

Geological Sciences

German Master of Arts

Gerontology (MA) - see Mizzou Online section

Gerontology Graduate Minor

Graduate School Courses

Health Management and Informatics

History

Human Development & Family Studies

Human Environmental Sciences PhD with emphasis areas (web link)

Informatics Institute Graduate Programs (MUII)

International Development Graduate Minor

Journalism

Law (dual degrees with several graduate programs; for the JD, refer to http://law.missouri.edu/students/)

Law, Dispute Resolution Master of Law (LLM) Degree

continued on next page

Library Science - see Mizzou Online section

Linguistics Graduate Minor

Mathematics

Medical Pharmacology & Physiology

Medicine
(for MD, MD/MS, or MD/PhD refer to http://som.missouri.edu/)

Medieval and Renaissance Studies Graduate Minor (Web link)

Mizzou Online: MU Graduate Degrees, Certificates, and Courses Online

Molecular Microbiology & Immunology

Multicultural Psychology and Education Graduate Minor (Web link)

Museum Studies Graduate Minor (Web link)

Music

Natural Resources

Neuroscience Interdisciplinary Graduate Programs

Nursing

Nursing online degrees - see Mizzou Online section

continued on next page

Nutrition and Exercise Physiology

- Exercise Physiology
- Nutritional Sciences

Occupational Therapy: Master of Occupational Therapy

Online Degrees - see Mizzou Online section

Parks, Recreation & Tourism

Pathobiology Area Program Doctorate (PhD)

Pathology and Anatomical Sciences

Personal Financial Planning

Pharmacology - see Medical Pharmacology & Physiology

Philosophy

Physiology - see Medical Pharmacology & Physiology

Physical Therapy Degree Program (DPT)

Physics and Astronomy

Plant, Insect & Microbial Sciences

Political Science

Psychological Sciences

Public Affairs

continued on next page

Public Health Graduate Degrees

- Family & Community Medicine: Master of Science in Public Health
- Public Health: Master's of Public Health
  - – Concentration Area: Health Promotion and Policy
  - – Concentration Area: Veterinary Public Health

Religious Studies

Responsible Conduct of Research - Dean's Certificate

Romance Languages & Literatures

Rural Sociology

Russian and Slavonic Studies

Social Work

Sociology

Soil, Environmental and Atmospheric Sciences

South Asia Language & Area Studies

Spanish - see Romance Languages & Literatures

Statistics

Textile and Apparel Management

Theatre

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Veterinary Biomedical Sciences – see Biomedical Sciences MS degrees with Emphasis Areas

Veterinary Medicine (for DVM, see http://vetmed.missouri.edu/)

Veterinary Pathobiology (PhD) – see Pathobiology Area Program Doctorate

Women & Gender Studies Graduate Minor

Youth Development - see MU Direct

END OF GRADUATE PROGRAMS LIST

Agricultural Economics Graduate Programs

Contact Information

Department of Agricultural and Applied Economics
200 Mumford Hall
573-882-3747
http://dass.missouri.edu/agecon/grad/

About Agricultural Economics Graduate Programs

A leader in the application of new institutional economics to agriculture, development, and policy analysis, the Department of Agricultural and Applied Economics at the University of Missouri is recognized for its innovative approach to graduate training in agricultural economics.

A PhD or MS degree in agricultural economics prepares students for a rewarding career in academia, agricultural business, government or international agriculture. Students can study agribusiness management, contracting and strategy; collective action and cooperative theory; econometrics and price analysis; entrepreneurship; environmental and natural resource economics; food, biofuel and agricultural policy and regulation; international development; regional economics and rural development policy; science policy and innovation; sustainable agriculture and applied ethics. The MS program may be a step toward the PhD but may also be used as a terminal program for those interested in careers in agribusiness, extension or government. Programs are flexible. All PhD and most MS students become involved in research, but those whose career interests lie in other directions find the department willing to accommodate them.

Internal Funding

A 3.25 GPA (A=4.0) is generally a minimum requirement for financial assistance such as fellowships and assistantships for research and teaching. Reasons for supporting a student with a GPA below 3.25 must be documented in detail.

continued on next page

Agricultural and Applied Economics Faculty

Georgeanne Artz
assistant professor, PhD, Iowa State University. Public policy, regional economics.

Chris Boessen
teaching assistant professor, PhD, University of Missouri. Agribusiness management.

D. Scott Brown
research assistant professor, PhD, University of Missouri. Policy analysis.

Fabio Chaddad
assistant professor, PhD, University of Missouri. Agribusiness management.

Michael L. Cook
professor, PhD, University of Wisconsin. Agribusiness managements, cooperatives, marketing and structure of markets.

Jan Dauve
teaching associate professor, PhD, Colorado State University. Economic education and natural resource economics.

Brady J. Deaton
chancellor, PhD, University of Wisconsin. Economic development.

Harvey James
associate professor, PhD, Washington University in St. Louis. Agribusiness management, business and applied ethics.

Thomas G. Johnson
professor, PhD, Oregon State University. Regional economics.

Nicholas Kalaitzandonakes
professor, PhD, University of Florida. Economics of technology and innovation.

continued on next page

Michael S. Kaylen
associate professor, PhD, Purdue University. Economic development and natural resources.

Peter Klein
associate professor, PhD, University of California-Berkley. Agribusiness management, industrial organization, financial economics.

Raymond Massey
extension professor, PhD, Oklahoma State University. Crop economics.

Laura McCann
associate professor, PhD, University of Minnesota. Environmental economics, transaction costs of agri-environmental policies, international development.

Seth Meyer
research associate professor, PhD. Policy analysis.

Willi Meyers
professor, PhD, University of Minnesota. Policy analysis and international trade.

Michael J. Monson
associate professor, PhD, University of Florida. Farm management, production and resource economics.

Kevin C. Moore
associate professor, PhD, Iowa State University. Farm management, production and finance.

Joe Parcell
associate professor, PhD, Kansas State University. Agriculture marketing.

Vern L. Pierce
extension associate professor, PhD, University of Missouri. Beef economics.

Ronald L. Plain
professor, PhD, Oklahoma State University. Livestock marketing.

continued on next page

Judy Stallmann
professor, PhD, Michigan State University. Community economics and state and local public finance.

Michael Sykuta
associate professor, PhD, Washington University in St. Louis. Agribusiness management.

Wyatt Thompson
assistant professor, PhD, University of Missouri. Policy analysis.

Corinne Valdivia
associate professor, PhD, University of Missouri. Economic development and agricultural research policy.

Randall Westgren
professor, PhD, Purdue University. Economics of entrepreneurship, strategic management in the agri-food sector, competitiveness

Patrick Westhoff
research associate professor, PhD, Iowa State University. Policy analysis.

Handy Williamson
vice provost for international programs and faculty development, professor, PhD, University of Missouri. Economic Development.

Abner W. Womack
professor, PhD, University of Minnesota. Policy analysis and information systems.

Yin Xia
assistant professor, PhD, Oregon State University. Biotechnology, productivity and technical change, and science and technology policy.

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Master's Degree in Agricultural Economics

Admission Contact Information

Jody Pestle (pestlej@missouri.edu)
200 Mumford Hall
Columbia, MO 65211
573-882-3747

Admission Criteria

Fall deadline: February 15
Spring deadline: September 15
- Minimum TOEFL score: 550/80 (paper/internet)

Required Application Materials

To the Graduate School (210 Jesse Hall; Columbia, MO 65211):
- All required Graduate School documents

To the Agricultural Economics Program:
- Departmental Application (PDF)
- 3 letters of recommendation (PDF)
- Statement of purpose
- GRE score report

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Prerequisites

Before admission to the MS program, a student should have completed at least nine hours of agricultural economics or economics, a course in calculus and one in statistics.

Graduation Requirements

For the MS degree, students must complete a minimum of 30 hours selected from courses accepted for graduate credit. The program must include graduate-level courses in intermediate microeconomic theory, intermediate macroeconomic theory, and multiple regression analysis. Students opting for the MS thesis must also complete at least six credit hours of research as part of the minimum 30 hours. An alternative

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MS non-thesis program requires that some additional course work be substituted for thesis research.

For More Information
For further information on admissions or financial assistance, write to Harvey James, director of graduate studies in agricultural economics, 200 Mumford Hall, Columbia, MO 65211, or hjames@missouri.edu.

Doctoral Degree in Agricultural Economics

Admission Contact Information
Jody Pestle (pestlej@missouri.edu)
200 Mumford Hall
Columbia, MO 65211
573-882-3747

Admission Criteria
Fall deadline: February 15
Spring deadline: September 15
- Minimum TOEFL score: 550/80 (paper/internet)

Required Application Materials
To the Graduate School (210 Jesse Hall; Columbia, MO 65211)
All required Graduate School documents

To the Agricultural Economics Program:
- Departmental Application (PDF)
- 3 letters of recommendation (PDF)
- Statement of purpose
- GRE score report

Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Prerequisites
Prerequisites for the PhD program include courses in intermediate

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microeconomics; intermediate macroeconomics; quantitative or mathematical economics; statistics, econometrics or regression and correlation analysis; and calculus. A master's degree in economics, agricultural economics, or a related field, is preferred but not required for admittance into the Ph.D. program. However, applicants to the PhD program without a master's degree will be admitted initially into the master's program with the expectation that they complete the MS degree including MS thesis before continuing with their doctoral studies.

Graduation Requirements

The size, quality and diversity of the faculty provide a broad choice of advisers and research topics. Students may specialize in agribusiness management; resources and development; or markets, trade and policy analysis. The student and the doctoral advisory committee have considerable latitude in developing a plan of study. There is no foreign language requirement. The general course requirements for the PhD consist of courses in advanced microeconomic theory, new institutional economics, welfare economics, econometrics and research methodology, followed by a well-balanced selection of elective and research courses in agricultural economics and other disciplines at the 8000/9000 level. The course of study should prepare the student for the written qualifying exam taken after the first year of courses, the comprehensive exam assessing the student's competency in his or her chosen fields of study, independent research and the dissertation. A research paper prepared during the second year of study is also required. A dissertation embodying the results of original research must be written on a subject approved by the program committee. An oral examination over the dissertation completes the degree requirements.

For More Information

For further information on admissions or financial assistance, write to Harvey James, director of graduate studies in agricultural economics, 200 Mumford Hall, Columbia, MO 65211, or hjames@missouri.edu.

Courses

See Agricultural Economics (AG EC) in the MyZou online system.

Agricultural Education Graduate Programs

Contact Information

College of Agriculture, Food and Natural Resources
121 Gentry Hall
573-882-7451
http://www.ssu.missouri.edu/aged/

About Agricultural Education Graduate Programs

The programs are designed for students with interests in agricultural education and leadership development.

Course work includes program and professional development, evaluation, teaching and learning theories and practices, educational methods, organization and administration, leadership and communication.

Agricultural Education Faculty

Anna L. Ball
associate professor, PhD, University of Missouri.

Bryan L. Garton
professor, PhD, The Ohio State University.

Leon G. Schumacher
professor, PhD, Iowa State University.

Robert Terry, Jr.
professor, PhD, Texas A&M University.

Robert M. Torres
professor, PhD, The Ohio State University.

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Master's Degree in Agricultural Education

Admission

Contact Information
Dr. Robert M. Torres (torresr@missouri.edu)
121 Gentry Hall; Columbia, MO 65211
573-882-7451

Admission Criteria

Fall deadline: N/A

- Minimum TOEFL score: 500 (paper)
- Minimum GRE score: N/A
- Minimum GPA: Average of 3.0 in the last 60 hours of undergraduate course work

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Agricultural Education Program:

- Résumé
- Official transcripts
- Personal data sheet

Applicants with less than a 3.0 grade point average on their last 60 hours of course work and international students must submit at least three letters of recommendation.

GRE (if required for you; see the program's admission page for more information)

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

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Graduation Requirements
The department offers three MS degree options:
1. Thesis
2. Creative Component
3. Teacher Certification

Thesis Option
The Thesis option requires a minimum of 30 hours of graduate credit (to include a minimum of 24 hours of formal graduate courses, plus a maximum of six hours of 8090 Research) with a minimum of 15 credit hours at the 8000 level. Candidates must also complete an approved thesis based on original research.

Creative Component
The Creative Component option requires a minimum of 32 hours of graduate credit (to include a minimum of 29 hours of formal graduate courses, plus a maximum of 3 hours of 8080 Creative Component) with a minimum of 16 credit hours at the 8000 level. Candidates must also complete an approved creative component project.

Teacher Certification
The Teacher Certification option requires a minimum of 32 hours of graduate credit (to include a minimum of 29 hours of formal graduate courses, plus a maximum of 3 hours of 8080 Creative Component) with a minimum of 16 credit hours at the 8000 level. Candidates must also complete an approved creative component project. Included in the course work for this option are some of the classes needed for certification to teach secondary high school agriculture in Missouri.

Doctorate Degree in Agricultural Education

Admission
Contact Information
Dr. Robert M. Torres (torresr@missouri.edu)
121 Gentry Hall; Columbia, MO 65211
573-882-7451

Admission Criteria
Fall deadline: N/A
- Minimum TOEFL score: 5 • 50/213 (paper/computer)

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- Minimum GPA: 3.5 on prior graduate course work
- Minimum GRE score: Preferred V+Q=1000
- Minimum of 3 years full-time appropriate teaching or other professional experience in elementary, secondary, higher education or industry.
- Correspondence with one of the Agricultural Education faculty members in the proposed area of concentration prior to submitting an application. This contact is ultimately a requirement for admission.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Agricultural Education Program:

- Résumé
- Official transcripts
- Official GRE scores
- Personal data sheet
- Statement of purpose
- Minimum of 3 letters of recommendation

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Prerequisites

The focus of the Doctor of Philosophy program is development of professional educators for teacher certification programs in agriculture. To be admitted, applicants must have completed a minimum of three years of professional experience in a field related to agricultural education.

Courses

See Agricultural Education Courses (AG ED) in the MyZou online system.

END OF PROGRAM DESCRIPTION

Animal Sciences Graduate Programs

Contact Information

159 ASRC, 920 E. Campus Drive, Columbia, Mo 65211
(573) 882-7446
Animal Science Graduate Program Web site:
http://animalsciences.missouri.edu/academics/graduates.php

About Animal Sciences Graduate Programs

The Division of Animal Sciences has a broad-based teaching program, and our faculty members are noted for teaching and mentoring excellence. A key feature of our teaching program is the use of ranked faculty in the classroom. Our graduate program has maintained or increased numbers, support, and placement rates over the past five years. The Division strives to maintain a diverse faculty qualified to teach relevant courses in five discipline areas (physiology, ruminant nutrition, monogastric nutrition, genetics and livestock production) and across six species (swine, dairy cattle, beef cattle, poultry, companion animals and horses) to serve the demand for graduates to be employed by the Missouri livestock and agribusiness industries.

Animal Sciences Faculty

Rodney D. Geisert
division director and professor, PhD, University of Florida. Reproductive physiology-swine.

William R. Lamberson
director of graduate studies, professor, PhD, University of Nebraska. Animal breeding and genetics.

Gary L. Allee
professor, PhD, University of Illinois. Swine nutrition.

Jeffre D. Firman
professor, PhD, University of Maryland. Poultry physiology and nutrition.

continued on next page

Kevin L. Fritsche
professor, PhD, University of Illinois. Lipid nutrition, immunology.

George Wm. Jesse
professor, PhD, University of Missouri. Swine production and management.

Duane Keisler
professor, PhD, West Virginia University. Reproductive physiology.

Monty S. Kerley
professor, PhD, University of Illinois. Fermentation biochemistry.

David Ledoux
professor, PhD, University of Florida. Mineral metabolism.

Matthew Lucy
professor, PhD, University of Florida. Molecular endocrinology.

David Patterson
professor, PhD, Kansas State University. Extension beef cattle reproduction.

Randall Prather
professor, PhD, University of Wisconsin-Madison. Reproductive physiology/molecular biology.

Rex R. Ricketts
professor, PhD, University of Missouri. Commercial agriculture.

R. Michael Roberts
professor, PhD, Oxford University. Molecular biochemistry.

Michael F. Smith
professor, PhD, Texas A&M University. Reproductive physiology-beef cattle.

Barry J. Steevens
professor, PhD, Oklahoma State University. Extension-dairy production and management.

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Jeremy Taylor
professor, PhD, University of New England, Australia. Genomics.

James E. Williams
professor, PhD, West Virginia University. Ruminant nutrition.

Jonathan Green
associate professor, PhD, University of Missouri. Molecular biology.

Carol Lorenzen
associate professor, PhD, Texas A&M. Meat science.

Kathy Sharpe Timms
associate professor, PhD, University of Tennessee. Infertility and endometriosis.

Tim Safranski
associate professor, PhD, University of Missouri. Extension-swine breeding and genetics.

Marcia Carlson Shannon
associate professor, PhD, Michigan State University. Extension-swine nutrition.

Don Spiers
professor, PhD, Michigan State University. Environmental physiology.

Peter Sutovsky
associate professor, PhD, Czech Academy of Sciences. Molecular/cell/development biology.

Bryon Wiegand
associate professor, PhD, Iowa State University. Meat science.

Gavin Conant
assistant professor, PhD, University of New Mexico, Bioinformatics and genetics.

continued on next page

Rocio Rivera
assistant professor, PhD, University of Florida. Animal molecular and cell biology.

Trista Strauch Safranski
assistant professor, PhD, Texas A&M University. Nutrition/reproduction interactions.

Robert Schnabel
assistant professor, PhD, Texas A&M University. Genetics.

Laura Schulz
assistant professor, PhD, Univ of Illinois – Urbana-Champaign. Reproductive biology and perinatal research.

Justin Sexten
assistant professor, PhD, University of Illinois-Urbana. Ruminant nutrition.

Matthew Waldron
assistant professor, PhD, Cornell University, Dairy nutrition and physiology.

Robert Weaber
assistant professor, PhD, Cornell University. Animal breeding.

Kevin Wells
assistant professor, PhD, North Carolina State University. Genetics.

Ellen Dierenfeld
adjunct professor, PhD, Cornell University. Exotic animal nutrition.

Dennis Lubahn
adjunct professor, PhD, Duke University. Nutritional aspects of estrogen and hedgehog signaling in reproduction and cancer.

Aaron Gaines
adjunct assistant professor, PhD, University of Missouri. Animal nutrition.

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Master's Degree in Animal Sciences

Admission Contact Information

159 ASRC, 920 E. Campus Drive, Columbia, Mo 65211
(573) 882-7446
Animal Science Graduate Program

Admission Criteria

- Fall deadline: Rolling
- Minimum TOEFL score: 500 (paper)
- Minimum GRE score: V:400 Q:550
- Minimum GPA: 3.0
- Approval of adviser
- Bachelor's degree

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Animal Sciences Program:

- Statement of career objectives
- 3 reference letters
- Résumé
- Official GRE score report

Graduation Requirements

The standard master's degree program requires a minimum of 30 hours of graduate credit (to include a minimum of 24 hours of formal graduate courses, plus a minimum of six hours of 8090 Research) and an approved thesis based on original research.

Two credit hours in seminar are required for the master of science degree.

No more than two 7000-level animal sciences courses can contribute to the plan of study.

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Doctoral Degree in Animal Sciences

Admission Contact Information

159 ASRC, 920 E. Campus Drive, Columbia, Mo 65211
(573) 882-7446
Animal Science Graduate Program

Admission Criteria

- Fall deadline: Rolling
- Minimum TOEFL score: 500 (paper)
- Minimum GRE score: V:400 Q:550
- Approval of adviser
- MS degree (with thesis) preferred

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Animal Sciences Program:

- Official GRE score report
- Statement of career objectives
- 3 reference letters
- Résumé

Graduation Requirements

The number of credit hours in formal course work and in research varies with the student's background, training interests and the nature of the research. Four credit hours of seminar and a course in research ethics are required for the doctoral degree. A dissertation based on original research is required of each candidate. Completion of requirements for a doctoral degree is generally expected within three years (five years without prior MS) after admission to the PhD program.

Animal Sciences Courses

See Animal Science (AN SCI) in the MyZou online system.

END OF PROGRAM DESCRIPTION

Anthropology Graduate Programs

Contact Information

College of Arts and Science
107 Swallow Hall
573-882-4731
http://anthropology.missouri.edu/

About Anthropology Graduate Programs

Incoming graduate students would be admitted into one of three tracks:
1) MA track
2) PhD students required to complete MA coursework
3) PhD students with MA in hand

Details for each category are listed below.

Track One: MA students
Students admitted to this track will be classified as **MA seeking students with the graduate school**. These students will complete all requirements for the MA degree as currently outlined in the Anthropology graduate program, including the MA exam and completing a thesis. Upon completion, the student can, if eligible, apply to the Anthropology program for acceptance as a Ph.D. seeking student.

Track Two: PhD students required to complete MA coursework
Students admitted to this track will be classified as **PhD seeking students with the graduate school**. These students will complete all course requirements for the MA, as well as the MA exam. With the consent of the student's committee, they will then complete either a **thesis** OR a proposal that will serve as their **PhD dissertation proposal**, OR a **published, primary authored paper**. In each of these cases, the student will still need to orally defend the work. Upon successful completion of these requirements, they will be awarded an MA, and will then be eligible to continue work towards their Ph.D. without the need of reapplying to the program or changing their student status.

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Track Three: PhD students with MA in hand
Students admitted to this track will be classified as **PhD seeking students with the graduate school**. They will not be required to complete the MA exam or prepare a thesis, proposal or published paper, nor will they earn an MA during their graduate work at Mizzou. Upon completion of the requirements currently listed for the Department's PhD program, the student will be awarded a PhD
The department's Museum of Anthropology provides some opportunities for museum-oriented studies. The department participates in the graduate minor in ancient studies and the certificate program in conservation biology. All graduate tracks emphasize the development of logical reasoning and the ability to write clearly and concisely.

Facilities and Collections
Departmental research facilities/collections include a paleoethnobotany laboratory, a comparative faunal collection, a skeletal biology laboratory, extensive holdings of archaeological and skeletal materials from Missouri and ethnographic specimens from many parts of the world. The Museum Support Center, an archaeological research and curation facility is located on the edge of campus. The University of Missouri Herbarium is also housed in this facility. Refer to the Web site for more information about departmental facilities (http://anthropology.missouri.edu). Resources in other departments or research units available by arrangement include the Archaeometrics Laboratory of the Research Reactor, the Electron Microscopy Facility, and the Stable Isotope Laboratory of the Department of Geological Sciences.

Research by Location
Regular faculty members of the department conduct research in the following geographical areas, beyond Missouri: the Northwest (archaeology), Europe (biological anthropology), the Mississippi River Valley (archaeology), Canada (biological and cultural anthropology), Ecuador and Peru (archaeology), South Asia (cultural anthropology), Dominica and Amazonia (biological & cultural anthropology). Refer to the faculty list for interests of emeritus faculty.

Internal Funding Opportunities
Teaching, research and student assistantships, fellowships and scholarships are available to qualified graduate students on a competitive basis. Applications for financial assistance should

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accompany application for admittance to the graduate program in anthropology. Refer to the departmental Web site (http://anthropology.missouri.edu) for applications and due dates, or address inquiries to the Department of Anthropology, 107 Swallow Hall, Columbia, MO 65211.

Anthropology Faculty

R. Lee Lyman
chair, professor, PhD, University of Washington. Archaeology, faunal analysis, taphonomy; Northwest.

Michael J. O'Brien
professor, PhD, University of Texas. Archaeology, theory and method, evolution; Midwest.

Deborah M. Pearsall
professor, PhD, University of Illinois. Paleoethnobotany, ethnobotany, phytolith analysis, archaeology, agricultural origins and evolution; South America, Caribbean, Midwest.

Lisa Sattenspiel
professor, PhD, University of New Mexico. Disease in human populations, demography, ecology, mathematical modeling, population genetics.

Mark V. Flinn
professor, PhD, Northwestern University. Evolutionary theory, human mating systems, parent–offspring relationships, time allocation methods, childhood stress, radioimmunoassay of hormones; Caribbean.

Craig Palmer
associate professor, PhD, Arizona State University. North Atlantic maritime cultures, especially Newfoundland, evolution and human behavior, especially related to religion, kinship, ecology and human sexuality.

Gregory Blomquist
assistant professor, PhD, University of Illinois-Urbana. Biological anthropology, genetics, primatology, Kenya.

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Libby Cowgill
assistant professor, PhD, Washington University. Biological Anthropology, late Pleistocene human evolution, human growth and development, functional morphology.

Mary Shenk
assistant professor, PhD, University of Washington. Cultural anthropology, evolution, marriage, demography, South India.

Christine VanPool
assistant professor, PhD, University of New Mexico. Archaeological method and theory, religion, iconography and symbolic analysis, ceramic analysis, U.S. Southwest, northern Mexico, Casaa Grandes.

Todd VanPool
assistant professor, PhD, University of New Mexico. Archaeological method and theory, cultural evolution, Southwestern archaeology, stone artifact analysis, quantitative methods, anthropology of gender.

Rob Walker
assistant professor, PhD, University of New Mexico. Cultural anthropology and biological anthropology, human behavioral ecology, cultural evolution, life history theory, phylogenetic methods, South America, Amazonia.

Emeritus Faculty

Robert A. Benfer
professor emeritus, PhD, University of Texas. Bioarchaeology, physical anthropology, archaeology, methods, statistics; Peru, Mexico.

Louanna Furbee
professor emeritus, PhD, University of Chicago. Linguistic and cognitive anthropology, language and culture; Mesoamerica (Maya), Andes, Chiwere (Siouan).

Peter M. Gardner
professor emeritus, PhD, University of Pennsylvania. Anthropology of knowledge, cognition, foraging adaptations, gender, history of anthropology; India, Subarctic.

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Michael C. Robbins
professor emeritus, PhD, University of Minnesota. Cultural anthropology, psychological anthropology, substance use, mathematical anthropology.

Ralph M. Rowlett
professor emeritus, PhD, Harvard University. Prehistory, ethnohistory, method and theory, lithic and TL analysis; Europe, Old World.

Robert F. G. Spier
professor emeritus, PhD, Harvard University. Cultural anthropology, technology; Old World.

Samuel D. Stout
professor emeritus, PhD, Washington University. Biological anthropology, bone histology, bone physiology, paleopathology, forensic anthropology (not in residence at MU).

W. Raymond Wood
professor emeritus, PhD, University of Oregon. Archaeology, ethnohistory; Great Plains and Midwest.

Admission (Track One and Track Two)

Admission Contact Information

107 Swallow Hall, Columbia, MO 65211
573-882-4731

Admission Criteria

- Fall deadline: January 10
- Spring deadline: October 15 (no departmental financial aid available this term)
- Minimum TOEFL score: 500 (paper)
- Minimum GRE score: V+Q=1000, A=3.0
- Minimum GPA: 3.25 in last 60 hours and in all anthropology courses
- Letters of recommendation: 3
- Some of these requirements may be waived in exceptional cases.

Acceptance into the graduate program in anthropology is not limited to students with undergraduate degrees in anthropology.

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Required Application Materials

To the Graduate School:

- All required Graduate School documents
- 3 letters of recommendation (through online application)

To the Anthropology Program:

- Department of Anthropology application
- Official GRE scores
- Teaching assistant financial aid form

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

For More Information

Further description of the graduate program and requirements may be found in the MU Department of Anthropology Graduate Program Guide, available upon request or accessible on the Department Web site.

Graduation Requirements (Track One)

A student is expected to have advanced knowledge in the four areas of anthropology and understand the relationships among them upon completion of the MA degree. Opportunities for specialization are provided through research courses leading to a thesis. A program tailored to each student's educational objectives is planned by the student and the advisory committee of at least three members, one of whom is a non-anthropologist faculty member.

Credit Hours Required for Master's Degree (Track One And Track Two)

Students must complete a minimum of 30 credit hours beyond the bachelor's degree. At least 9 of the required hours must be 8000-level anthropology courses and seminars, and must include at least one content course (i.e., not a readings or research course). In addition to the 8000-level requirement, all students must take Anthropology 8010 and 8020 (History of Anthropology I, II). A maximum of 12 hours may be in non-thesis research (Anthropology 7990/8990) or reading courses (Anthropology 7960).

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Statistics Component
Students lacking a basic course in statistics are required to take at least one course, preferably during the first year of graduate work.

Breadth of Knowledge
Completion of at least one graduate course in each of the four areas of anthropology is recommended.

Examination
After completing the Anthro. 8010/8020 sequence, the student must pass the oral MA examination.

An oral exam that:
1. is taken no later than the semester following the successful completion of 27 hours in our graduate program.
2. is administered by an examination committee consisting of the student's advisor and one member randomly drawn from each of the other two subfields (linguistics excepted)
3. lasts no longer than 2 hours.
4. is designed to determine if the student has both sufficient breadth of knowledge in all three/four sub-fields to teach an anth 1000 course and some current knowledge on at least one sub-field of their choice.
5. If, in the examining committee's opinion, the student has satisfactorily shown competency in all areas except one, then the committee may give the student a conditional pass and require them to write an essay on a specified topic within the inadequate area rather than retaking the entire oral exam. This essay must be approved by the committee before the student is deemed to have passed the exam.
6. can be retaken one, and only one, time.
7. must be successfully passed before the student can defend his or her MA Thesis.
8. includes 5 or more general questions each sub-field has agreed upon earlier and informed the student about to help the student prepare for the exam. This is to help improve the consistency among examinations. Questions asked during the examination should build upon these topics, and can (and should) vary from the limited number of specific questions, especially as related to the student's interests or perceived weaknesses.

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Thesis (Track One) or thesis, proposal or published paper (Track Two)
A thesis (Track One) or thesis, proposal or published paper (Track Two), for a minimum of three hours and a maximum of six hours of credit (Anthropology 8090), is required for the master's degree.

Admission (Track Three)

Admission Contact Information
573-882-4731

Admission Criteria
- Fall deadline: January 10
- Spring deadline: October 15
- Minimum TOEFL score: 500 (paper)
- Minimum GRE score: V+Q=1000, A=3.0
- Minimum GPA: 3.5 in previous graduate work
- Letters of recommendation: 3
- Master's degree
- A faculty who is a member of the doctoral faculty must agree, as a condition of admission, to accept the student as a PhD advisee. These qualifications apply to all applicants, including those with an MA degree from this department. Applicants whose MA is in a field other than anthropology will be considered under the policies for individuals holding the baccalaureate degree except that the quality of graduate work will be taken into consideration.

Required Application Materials
To the Graduate School:
- All required Graduate School documents
- 3 letters of recommendation (through online application)

To the Anthropology Program:
- Department of Anthropology application
- Official GRE scores
- Teaching assistant financial aid form

Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other

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funding packages. Check the program Web site or ask the program contact for details.

Specialization
The doctoral candidate normally specializes in one of the recognized subfields of anthropology or, in consultation with a doctoral program committee, chooses an area of specialization that either cuts across some of the recognized divisions or includes some area outside traditional anthropology. Traditional areas of specialization currently offered include: Social/cultural anthropology, ethnohistory, ecological and environmental anthropology, human behavioral ecology. Biological anthropology, forensic anthropology, skeletal biology, human osteology, human evolution, demography, epidemiology. Archaeology, chronology, materials research, sociocultural evolution, zooarchaeology, paleoethnobotany, experimental archaeology.

For More Information
Further description of the graduate program and requirements may be found in the MU Department of Anthropology Graduate Program Guide, available upon request or on the Department Web site.

Graduation Requirements

Students seeking a PhD in anthropology must fulfill all Graduate School requirements within the time period specified in the Graduate Catalog. In addition, the Department requires that PhD students take (or have taken):
1. a basic course in statistics
2. a mid-level statistics course [this requirement may be waived at the discretion of the student's Doctoral
Program Committee]
3. Anthropology 8010 and 8020 (History of Anthropology I, II) or equivalent

Foreign Language Requirement
Competency in at least one foreign language may be required by the student's doctoral program committee.

Residency Requirement
The Department of Anthropology residency requirement is two consecutive 9-hour semesters, or three consecutive 6-hour semesters.

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Oral Qualifying Examination

Students must pass an oral qualifying examination during the first year of graduate work. The examination is administered by at least three members of the Anthropology Department faculty. The purpose of the two-hour oral examination is to determine if the student is prepared for doctoral work, and to expose weaknesses that should be met in the course of the degree.

Program Committee

After students successfully qualify for the PhD program, their status is "applicant for the PhD." The Doctoral Program Committee is now established. It is composed of at least four faculty members, at least three of whom must be members of the Department of Anthropology, and at least one from another MU doctoral program who holds a PhD in another subject.

Program Objectives

The PhD degree is primarily oriented toward research competence. Therefore, the student is judged on research promise and ability. The objective of course work is to produce an anthropologist with some competence in all fields and a special competence in a chosen field for purposes of teaching, research and evaluation of others' research.

Satisfactory Progress

Students are expected to make satisfactory progress in their program, and each student's performance is reviewed by the director of graduate studies at the end of each semester. A GPA of 3.5 in anthropology courses must be maintained. The student's Doctoral Program Committee is responsible for developing the plan of study. MU requires a minimum of 72 semester hours beyond the bachelor degree for PhD degrees. There must be a minimum of 15 hours of course work at the 8000-level (exclusive of research, problems and independent study experiences). No set number of hours beyond the MA is mandated, but most students amass 48 to 60 hours of graduate study beyond the MA.

Teaching Experience

PhD candidates are required to attain teaching experience. This can be accomplished either by serving as a departmental graduate teaching assistant for one semester (stipends for which are awarded

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competitively) or by assisting a faculty member in the preparation and teaching of one course.

Comprehensive Examination
An applicant for the PhD normally takes a comprehensive examination at the end of the second or third year of the program. The comprehensive examination, which involves up to five days of written responses to committee questions and a two-hour oral examination, is designed to determine if the student's level of competence in the field meets professional standards. The student is examined by all members of the Doctoral Program Committee.

Post-Comprehensive Examination: PhD Candidacy
After a student successfully passes the comprehensive examination, the student's status is "candidate for the PhD." Beginning the term after the term in which the comprehensive exam was successfully completed, the candidate for the PhD must maintain continuous enrollment, which is 2 hours of Anthropology 9090 each fall and spring semester, and 1 hour each summer session. Continuous enrollment must be maintained up to and including the term in which the dissertation is defended.

Graduation
The PhD in anthropology is awarded after an accepted dissertation has been submitted and defended successfully before the candidate's Doctoral Program Committee. A minimum of three hours research credit (Anthropology 9090) is needed for the PhD dissertation.

Anthropology Courses

See Anthropology (ANTHRO) in the MyZou online system.

END OF PROGRAM DESCRIPTION

Architectural Studies Graduate Programs

Contact Information

College of Human Environmental Sciences
137 Stanley Hall
573-882-7224
http://arch.missouri.edu/

About the Program

The Department's mission is to educate future design practitioners, advance research of the built environment and disseminate knowledge of architectural studies to improve quality of life for people. The philosophy of the Department of Architectural Studies embraces the synergy created between architecture and interior design. Having a symbiotic relationship, both fields explore the design process and its final products. Promoting the meaning and value of physical settings and responding to the human condition, the program investigates the interaction between people and their surroundings to create a more beautiful and sustainable world.

The program encourages an interdisciplinary, scholarly climate celebrating aesthetic values and the human sciences. Consistent attention is placed on planning and designing physical environments that support human needs and aspirations. Course work may include courses in supportive areas such as the human and physical sciences, art, humanities and allied design professions.

Professional Opportunities

Career opportunities for master's and doctoral graduates of the Department and College include leadership positions in design; consultation practices in industry, government and education; and academic and administrative positions in higher education and research. Graduates from the MA degree program may pursue careers in the design professions, education and the advertising and entertainment industries. Graduates of the MS and PhD degree programs pursue academic and professional careers integrating design theory with their research skills.

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Financial Aid from the Program
Limited teaching and/or research assistantships and scholarships are available to graduate students. GTA appointments are based on the match between the department's needs and candidate's background.

Architectural Studies Faculty

Ruth Brent Tofle
chair, professor, PhD, University of Minnesota.

Benyamin Schwarz
professor, PhD, University of Michigan.

Richard Helmick
professor emeritus, MFA, Ohio University.

Ronald Phillips
associate professor, ArchD, University of Michigan.

Bimal Balakrishnan
assistant professor, PhD, Pennsylvania State University.

Newton D'souza
assistant professor, PhD, University of Wisconsin—Milwaukee.

So-Yeon Yoon
assistant professor, PhD, University of Missouri.

Michael Goldschmidt
resident assistant professor, MArch/Master of Ecological Design - San Francisco Institute of Architecture.

Graduate Program Requirements

The academic program should be developed in consultation with an adviser by the end of the first full semester of residence or at the successful conclusion of at least nine credit hours. Students complete the online Graduate Student Progress System. Annual reviews of graduate students will be conducted to include the indicators listed by the Graduate School.

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Architectural Studies Degrees
Graduate Programs offer two emphases: 1) in environment and behavior studies with research leading to the MS and PhD degrees and 2) in environmental design with a creative project leading to an MA degree. The graduate program builds on Architectural Studies course work and a core of courses in design theory, research methods, graduate seminars, research and readings in environment and behavior.

Master's Degree in Architectural Studies

Admission Contact Information
Dr. Ronn Phillips (phillipsr@missouri.edu)
137 Stanley Hall; Columbia, MO 65211
573-882-7224

Admission Criteria
- Fall deadline: February 1
- Spring deadline: September 1
- Minimum TOEFL score: 500/200 (paper/computer)
- Minimum GPA: 3.0 Required Application Materials

Required Application Materials
To the Graduate School:
- All required Graduate School documents
- Statement of graduate goals and educational objectives discussing: which of the department's emphasis areas is of interest; intentions regarding the MA, MS; and request for a specific adviser (upload to online application)

To the Architectural Studies Program:
- Departmental application
- 3 letters of recommendation (excluding MU Architectural Studies faculty). Can be uploaded to the online Graduate School application or mailed directly to the program.
- For MA applicants only, portfolio of slides, prints and/or publications. (Do not mail originals.)

Master of Art
The creative, project-based, MA plan of study is often undertaken in preparation for careers in the design professions and education, as

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well as in the advertising and entertainment industries. The project is conducted in the area of design with digital media using high-end computer software. The culmination of the degree is a professionally reviewed, visual project employing digital Media.

Master of Science

The design and research-based MS plan of study is often undertaken in preparation for professional practice or design education. The project is conducted in emphasis areas as described below. Within each of these emphases, specific course work is selected based on subject matter, the type of design project and its research application. The culmination of the degree is a professionally reviewed design project with supporting written report. The research-based MS plan of study is often undertaken as preparation for the doctoral degree.

Research is conducted in one of two emphasis areas — design with digital media or environment and behavior studies. Within each emphasis area, specific course work is selected based on subject matter and the type of research method selected — quantitative, qualitative or a combination of both methods. The culmination of the degree is the written research thesis employing quantitative, qualitative or both research methods.

MS students must complete a final oral examination by an approved faculty committee and submit a presentation proposal at a professional conference or a manuscript in a professional journal.

Design with Digital Media Option

Design with Digital Media, as an integral part of the design process, focuses on graphic ideation and the application of computer technology for architecture, interior design and related disciplines. This program of study has an emphasis on design with digital media leading to MA, MS, and PhD degrees. MA is a project-based program of study, whereas the MS is research-based.

Current study areas in the digital media program include:

- Environment and Behavior Studies Using Digital Media
- Digital Design Education for Architecture and Interiors
- Study, Exploration and Research of Generative Digital Representation Techniques
- Digital and Collaborative Learning Environment for Design

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- 3D Modeling & Rendering, Animation
- Virtual Reality & Real-time Environment
- 3D Analysis of Form, Space & Design Principles in Architecture
- Video Game Technology for Architecture & Interiors
- Digital and Integrative Audiovisual Media for Design Communication
- Theories of Filmic and Moving Images
- Theories in Design with Digital Media

The culmination of the degree is a written and/or visual project employing computer applications for design methods. Applicants interested in the Design with Digital Media option should contact the coordinator of Design with Digital Media Dr. So-Yeon Yoon for course content and research proposals.

Environment and Behavior Studies

The Environment and Behavior Studies focus is on the multifaceted relationships between people and their physical, social, and cultural environments. Environment-behavior research explores a variety of environments, linking them to a range of behavioral concerns. This program is suitable for persons who seek careers in research, consulting, and/or teaching in architecture, interior design, and related environmental design disciplines. A design project leads to the MA and research leads to the MS or PhD degrees.

Current emphasis areas in environment and behavior include:

- Design Education
- Learning Environments for Design
- History of the Designed Environment
- Design Planning and Analysis
- Aesthetics of Design
- Universal Design/Accessibility
- Environment and Aging
- Health Care Design
- Housing, Neighborhood Design, and Sustainability
- Organizational Systems and Design
- Facility Management and Design
- Programming, Design and Post-Occupancy Evaluation

Contact Dr. Ronn Phillips for more information about the Department's graduate program or the emphasis in environment and behavior.

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Doctorate Degree in HES, Architectural Studies

Admission Contact Information

Dr. Ronn Phillips (phillipsr@missouri.edu)
137 Stanley Hall; Columbia, MO 65211
573-882-7224

Admission Criteria

- Fall deadline: February 1
- Minimum TOEFL score: 500 (paper)
- Minimum GPA: 3.0

Required Application Materials

To the Graduate School:

- All required Graduate School documents
- Statement of graduate goals and educational objectives discussing: which of the department's emphasis areas of interest; intentions regarding PhD; and request for a specific adviser (upload to online application)

To the Architectural Studies Program:

- Departmental application
- 3 letters of recommendation (excluding MU Architectural Studies faculty). Can be uploaded to the online Graduate School application or mailed directly to the program.

Doctor of Philosophy

The Doctor of Philosophy (PhD) degree is designed for individuals who are interested in acquiring the knowledge and skills that are needed to conduct substantive, innovative, and original research that contribute to the theoretical and methodological foundation of architecture and interior design, and the dissemination of this research through teaching, publication, and practice. To this end, the curriculum is structured so that students move gradually from overview of architectural research to the identification and pursuit of major and minor areas of specialization and, finally, to highly specialized original dissertation research. This framework promotes stimulating intellectual discourse among individuals with varying research philosophies and interests.

In order to pass examination, and thus qualify as the basis for the award of the PhD degree, the dissertation should have the following attributes:

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- It demonstrates authority in the candidate's field and shows evidence of command of knowledge in relevant fields;
- It shows that the candidate has a thorough grasp of the appropriate methodological techniques and an awareness of limitations;
- It makes a distinct contribution to knowledge because of the originality of the approach and/or interpretation of the findings and, in some cases, the discovery of new facts;
- It demonstrates an ability to communicate research findings effectively in the professional arena and in an international context;
- It is a careful, rigorous and sustained piece of work demonstrating that a research "apprenticeship" is complete and the holder should be admitted to the community of scholars in the discipline.

Doctoral study in Architectural Studies, College of Human Environmental Sciences, is research based and expands knowledge in the "major" areas of either environment and behavior or design with digital media. The major area is defined as that area of specialization in the Doctoral Program within which the student is expected to write his/her dissertation.

Students will choose a "supportive cognate area" which is intended to reinforce the development of an understanding of the discipline. Supporting cognate area courses are selected from a broad spectrum of disciplines providing students with the opportunity to design an individualized program of study that capitalizes on their unique interests and talents.

PhD Requirements

The University of Missouri requires a minimum of 72 semester hours beyond the baccalaureate degree for the Ph.D. The doctoral program committee provides departmental approval of the student's plan of study (Form D-2), a list of the courses and the credit to be earned in each of them, which will, when completed:

- Prepare the student for research or scholarly investigation in the chosen field of study.
- Satisfy the credit-hour and residency requirement of the department.
- Satisfy any special requirements (collateral field, other special research skills) imposed by the department.
- Satisfy the Graduate School's requirement for a minimum of 15 hours of course work at the 8000/9000 level (exclusive of research, problems and independent study experiences).

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The committee also recommends to the vice provost/dean, as part of the plan of study, any request for transfer of graduate credit. The student must substantially complete the course work outlined in the plan of study to the satisfaction of the doctoral program committee and the Graduate School before being declared ready for the comprehensive examination. See the MU Graduate Catalog for further requirements.

The PhD is a research-based plan of study leading to the written doctoral dissertation. The dissertation is distinctive because it demonstrates the ability to conceive of and execute scholarly research, and it makes a contribution of new knowledge to the discipline. Research is conducted in one of the two emphasis areas — environment and behavioral studies or design with digital media. Specific course work is chosen based on subject matter and the type of research method selected— quantitative, qualitative or a combination of both.

PhD students must complete a final oral examination by an approved faculty committee and submit a presentation proposal at a professional conference or a manuscript in a professional journal.

Architectural Studies Courses

See Architectural Studies (ARCHST) in the MyZou online system.

END OF PROGRAM DESCRIPTION

Art: Master of Fine Arts

Contact Information

Department of Art
A126 Fine Arts Building
Columbia, MO 65211-6090
573-882-4037
http://art.missouri.edu/grad

About the Program

The Department of Art offers a Master of Fine Arts (MFA) program that focuses on the creative goals of the individual. Our aim is to guide each student to finding and developing a particular direction and language as demonstrated by a coherent and conceptually unified body of artwork. Through an intense studio-based practice, our graduates develop into professional artists and college level educators who will successfully contribute to the culture on a local, national and global scale through different fields in the visual arts.

Degree Emphasis

Applicants typically study with an emphasis within a particular art medium. Applicants declare media emphasis of their choice at the time of application to the program. Media areas for selection include ceramics, drawing, fibers, graphic design, painting, photography, printmaking, and sculpture. Aspects of new media (2D and 3D computer imaging and animation, video production, web publishing and other digital media) are also integrated into the curriculum of many of the listed traditional media. It is also possible to declare an intramedia emphasis.

Financial Aid

Fellowships, scholarships, and tuition waivers, along with graduate teaching assistantships and graduate research assistantships with stipends are available to qualified graduate students. Assistantships include stipends. Some aid is awarded upon acceptance into the program, while others may be awarded later as the student develops within the program. Applications for graduate teaching assistantships should be submitted along with the application portfolio to the director of

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graduate studies. Application instructions follow later in this document. For a list of scholarships within the Department of Art, please visit the departmental Web site at http://art.missouri.edu/scholarships.html.

Some campus-wide opportunities are available, too. Most prominent would be the Mizzou Graduate Fellowship that is available for applicants for the fall semester (submitting deadline on January 1st each year) only. For details see http://gradschool.missouri.edu/financial/assistantships-fellowships/fellowships/.

Admission Criteria

- Fall semester deadline (priority for campus scholarships): January 1
- Spring semester deadline: September 1
- Minimum GPA: 3.0
- Minimum TOEFL score: 550/80 (paper/Internet)*

**For students from countries where English is not the native language.*

The preferred undergraduate degree for admission to the graduate program in visual art is the Bachelor of Fine Arts degree (BFA). However, applicants holding the BA, BS or other bachelor's degrees are eligible to apply if they have a minimum of 40 hours of undergraduate studio credits or an equivalent commensurate professional experience. Applicants for the Graphic Design Area are required to have a minimum of 2 years professional experience before applying.

Application materials are evaluated to determine if the applicant has the preparation and ability to undertake work for an advanced degree. Admission is based on the recommendations from the art department graduate faculty members representing each of the media areas, as well as the availability of open positions. Some applicants may be accepted but placed on a waiting list if openings are limited.

Facilities & Resources

Every studio area continually updates equipment and curriculum to coincide with technological advancements. Laboratory facilities are available in all media areas and there are individual graduate studios available for students working on the MFA degree. Additionally, the department houses a fully equipped papermaking facility, anagama kiln and bronze casting facility. Within the last 6 years, most classroom studios have been equipped with new window treatments, easels,

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taborets, desks and drawing tables.

New digital technologies are abundant. Each classroom has a dedicated iMac connected to a LCD digital projector. Wireless Internet access is available in all classrooms and studios. There are three large computer labs equipped with 24" iMac computers or Mac computers with HD cinematic displays. Current versions of the essential 2D, 3D and 4D creative software applications are loaded onto these machines. The labs also feature large-format Epson Stylus printers for paper and canvas. High-end digital video cameras as well as a green screen studio are also available for graduate students to use. Mac PowerBooks and digital projectors are available for short-term loan for lectures, too. All graduate students have access to ArtStor.org, a comprehensive digital image database, the Department of Art and Archaeology digital image database, plus our own comprehensive slide collection, much of which is also in digital form.

The Department of Art is home to the George Caleb Bingham Gallery. Monthly exhibitions highlight artwork by students, local, regional and national artists. The gallery provides an opportunity for students to experience a variety of traditional and contemporary approaches to art.

Campus art collections include the Museum of Art and Archaeology, Museum of Anthropology and the State Historical Society of Missouri. Ellis Library has an extensive and excellent holding of books, periodicals and reference materials on art and art history.

There is other great resources off-campus. Our yearly Florence Summer Study Abroad Program places students in Italy where students have a month to study firsthand many of the most important masterpieces in Western art history. Locally in central Missouri there are other colleges, museums, artist communities, galleries, workshops, fairs, film festivals and other community-based cultural institutions. It is a rich environment full of opportunities for young artists.

Faculty Research

The University of Missouri has been a leader in the visual arts since 1877 when the renowned painter George Caleb Bingham began teaching the first studio courses in the newly formed School of Art. Current faculty members follow in that tradition through their creative

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work that is nationally and internationally recognized. Their artwork may encompasses such varieties as: abstract and figurative painting and drawing, ceramics, sculpture, ceramics sculpture, as well as bronze cast sculpture, traditional and digital photography, all media of printmaking, surface design, illustration, papermaking and book arts, mixed-media, video, installation and performance art plus intermedia and intradmedia approaches. Many faculty members also have mastered various forms of new media such as computer 3D imaging and animation, web publishing and other forms of digital media as part of their artistic expression. Our faculty is a diverse group of highly creative artists working in a wide variety of materials, methods and concepts. All are eager to mentor young artists who share the passion for creativity, critical thinking and the arts.

Department Chair

Melvin C. Platt, PhD, University of Michigan.

Art Faculty

Nathan Boyer,
assistant professor, MFA, Yale University School of Art. Painting/drawing.

Jean M. Brueggenjohann,
professor, MFA, Indiana University. Graphic design/digital media.

James H. Calvin,
associate professor, MFA, Bowling Green State University. Sculpture.

R. Bede Clarke,
professor, MFA, University of Iowa. Ceramics.

Christopher Daniggelis,
assistant professor, MFA, The Ohio State University. Printmaking.

J. Brett Grill,
assistant professor, MFA, New York Academy of Art. Painting/drawing.

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William A. Hawk,
director of graduate studies, associate professor, MFA, Washington University. Painting.

Adrienne W. Hoard
professor, MFA, EdD, University of Illinois. 2-D design/color theory/art education.

Deborah L. Huelsbergen,
director of undergraduate studies, associate professor, MFA, Iowa State University. Graphic design/digital media.

Joe Johnson,
assistant professor, MFA, Massachusetts College of Art. Photography.

Mark Langeneckert,
director of Florence Summer Study Abroad, lecturer, BFA, Art Center College of Design. Drawing/illustration.

Lampo Leong,
associate professor, PhD-ABD, Central Academy of Fine Arts, Beijing, China; MFA, California College of the Arts. Painting/drawing.

Cherie Sampson,
assistant professor, MFA, University of Iowa. Foundations/3-Design/video.

Josephine M. Stealey,
professor, PhD, University of Missouri. Fibers.

Richard Wilson,
assistant professor, MFA, University of Missouri. Graphic design/digital media.

Jerry D. Berneche,
professor emeritus, MFA, Ohio University. Painting/drawing.

William A. Berry
professor emeritus, MFA, University of Southern California. Drawing.

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Robert F. Bussabarger,
professor emeritus, MA, Michigan State University. Ceramics/painting.

Brooke B. Cameron,
professor emeritus, MA, University of Iowa. Printmaking/drawing.

Larry Kantner,
professor emeritus, EdD, The Pennsylvania State University. Fundamentals of art/art education.

Lawrence Rugolo
professor emeritus, MFA, University of Iowa. Design/serigraphs.

Oliver A. Schuchard
professor emeritus, MFA, Southern Illinois University. Photography.

Frank H. Stack
professor emeritus, MA, University of Wyoming. Painting/drawing.

Admission Contact Information

William Hawk
Department of Art
A126 Fine Arts Building
University of Missouri
Columbia, MO 65211-6090, USA
573-882-8077
hawkw@missouri.edu

Required Application Materials
Application Materials – Submit to the Graduate School
All required Graduate School documents plus the following:

- Cover Letter of Intent (stating the goals for pursuing the MFA degree)
- A Digital Assets Sheet (defining the image and video files)
- Current Résumé (exhibition, award, publications, artistic experience, etc.)
- An artist's statement
- Three (3) letters of recommendation
- Official transcripts from each college attended
- Application for G.T.A. (optional but necessary for tuition waiver)

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Application Materials – Submit to the Art Department
The application process requires a digital portfolio documenting 20 separate pieces of the applicant's artwork. Applicants can document these works using twenty (20) to forty (40) digital still images and/or moving image files. Please limit submissions to a maximum of 2 images for any one piece of artwork. The artwork in the portfolio should represent your most recent and most accomplished work. The work should indicate your major artistic interests and creative direction. The work should demonstrate your creative ability and media competence. If you are requesting consideration for a teaching assistantship, a few of the images could be works that demonstrate your foundational mastery of a specific media area. Portfolios must be submitted in digital form on CD only. Please follow closely the instructions for the submission of images available on the department Web site at http://art.missouri.edu/grad.

Advising
Upon admission to the program, a candidate is assigned a graduate thesis committee chair/major adviser. This person will mentor the student throughout the student's tenure and help the student to establish the 3 member graduate thesis committee. By the second semester the student will select another committee member from the Graduate Faculty to serve as the student's second advisor. The chair/major adviser will also help the graduate student to select an outside member who is from the graduate faculty of another department.
In addition, students have access to all the art department faculty members for consultation throughout the duration of their studies.

Master of Fine Arts Degree Requirements

The MFA program consists of 60-70 credit hours.

The degree includes:
- 30 hours in the major area
- 9 hours in a minor area
- 3 hours of Graduate Studio Seminar
- A minimum of 1 hour of MFA research hours
- 11 hours of electives
- 6 hours of art history

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Graduate-Level Course Work
Graduate level courses are at the 7000/8000/9000 level. A minimum of 15 of the 30 hours must be selected from courses numbered at 8000 and/or 9000 levels; no more than 40 percent of the 30 hours credit requirement can be satisfied by Research, Readings and Problems courses. No credit is given for courses at the 4000 or below levels.

Residency Requirement
A minimum residency of two years is required for the degree. However, mere completion of the prescribed number of credit hours and the residency requirement is insufficient, rather the degree will be granted upon the student's high level of creative achievement as determined by the student's graduate thesis committee.

Regular Student Evaluation
The full graduate faculty of the art department reviews every MFA candidate once each year to determine the rate of progress. If the candidate fails to receive a passing evaluation during the review, the student is placed on probation for one semester and is required to be reviewed the following semester. If two consecutive unsatisfactory reviews occur, the student is dismissed from the MFA program.

Clearance
During the semester prior to graduation, the graduate thesis committee will approve the student to proceed with the final steps toward graduation, composing the written thesis and mounting the thesis exhibition.

Thesis Acceptance
The graduate thesis committee approves the thesis exhibition and written thesis. The final semester, the MFA candidate installs a thesis exhibition to display visual, artistic and professional achievement. The candidate thereafter presents a final draft of the written thesis that defends the conceptual and philosophical ideas of the final body of artwork. Photographic record of the pieces discussed must be included in the written thesis.

Each degree candidate must pass a two-hour oral final examination conducted by the Graduate Thesis Committee. The presentation must focus on the aspects of the academic study related to the written thesis

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and visual work. Following final approval of the thesis exhibition and the written thesis, the graduate will officially submit documentation of the theses to the graduate school. The thesis is submitted as PDF file on a CDROM to the Graduate School by the established deadline.

Time Limit and Extensions
The time limit for completion of the MFA degree is 5 years. Time spent in military service is excluded. For an extension for other reasons the student must petition the Graduate School through his/her chair/major adviser. The five-year period will extend from the beginning of the first semester of enrollment in which the student is accepted to the MFA degree program to the date of his/her clearance to graduate.

Courses

Refer to art graduate courses in the MyZou online system.

See ART-CERAMICS (ART CERM)
See ART-DRAWING (ART DRAW)
See ART-FIBERS (ART FIBR)
See ART-GENERAL (ART GNRL)
See ART-GRAPHIC DESIGN (ART GRDN)
See ART-PHOTOGRAPHY (ART PHOT)
See ART-PAINTING (ART PNT)
See ART-PRINTMAKING (ART PRNT)
See ART-SCULPTURE (ART SCUL)

END OF PROGRAM DESCRIPTION

Art History & Archaeology Graduate Programs

Contact Information

College of Arts and Sciences
109 Pickard Hall
573-882-6711
http://aha.missouri.edu/index.html

About Art History and Archaeology

The University of Missouri has played a prominent role in the teaching of the visual arts in North America since Walter Miller and John Pickard first began lecturing on campus in the 1890s. Our faculty and staff reflect the widening scope of our discipline with particular strengths in the areas of classical Mediterranean archaeology, medieval and Renaissance art, and the art and architecture of modern Europe and the Americas. Current faculty research interests range from early Greece and Rome to modern architecture and contemporary painting. Resources available to faculty and students include the department's Visual Resources Center and the Museum of Art and Archaeology, both located in Pickard Hall on the historic Francis Quadrangle, as well as the extensive collections of Ellis Library.

Degrees Offered

The Department of Art History and Archaeology offers the MA and the PhD degrees in art history and classical archaeology. The department participates in interdisciplinary graduate minors in Ancient Studies, Medieval and Renaissance Studies, and Women's and Gender Studies.

Funding: Internal and External

Applicants in both art history and archaeology are eligible for University fellowships awarded to entering students through a campus-wide competition. Several endowed departmental funds may be used to support graduate student research projects. Doctoral students may be awarded the Departmental Herbert Schooling Scholarship or the John Pickard Fellowship. Those in classical archaeology are eligible for the Walter Miller Fellowship. Holders of these fellowships may, with proper

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consent, hold additional grants not to exceed $1,000 or may hold teaching assistantships.

Travel Fellowship
The Weinberg Traveling Fellowship in classical archaeology also is available for advanced students.

Teaching Assistantships
Several teaching and research assistantships (10-20 hours a week) are available.

Tuition Waivers
Resident and nonresident educational fee waivers may be available to holders of fellowships and assistantships.

For More Info
For more information, write the director of graduate studies in Art History and Archaeology, 109 Pickard Hall, Columbia, MO 65211. You are also encouraged to consult the department's Web site

Art History and Archaeology Faculty

Anne Rudloff Stanton
chair, associate professor, PhD, University of Texas-Austin. Late Medieval and northern Renaissance art.

Kristin Schwain
director of graduate studies, associate professor, PhD, Stanford University. American art and material culture.

Keith Eggener
director of undergraduate studies, associate professor, PhD, Stanford University. Modern architecture and American art.

Susan Langdon
associate professor, PhD, Indiana University. Greek art and archaeology.

Norman Land
professor, PhD, University of Virginia. Italian Renaissance art and Baroque art.

continued on next page

Marcus Rautman
professor, PhD, Indiana University. Late antique, Byzantine and early Medieval art and archaeology.

Kathleen Warner Slane
professor, PhD, Bryn Mawr College. Roman art and archaeology.

Michael Yonan
assistant professor, PhD, University of North Carolina at Chapel Hill. 18th and 19th century European art.

William Biers
professor emeritus, PhD, University of Pennsylvania. Greek art and archaeology.

Patricia Crown
professor emerita, PhD, University of California-Los Angeles. 18th- and 19th-century art and women's and gender studies.

Howard Wight Marshall
professor emeritus, PhD, Indiana University. American folk art, material culture and vernacular architecture.

Osmund Overby
professor emeritus, PhD, Yale University. Architecture and American art.

Master's Degree in Art History and Archaeology

Admission Contact Information

Kristin Schwain (schwaink@missouri.edu)
109 Pickard Hall; Columbia, MO 65211
573-882-6711

Admission Criteria

Admission to the Department on the graduate level is granted yearly to a small number of candidates who hold recognized BA or MA degrees in art history or art, in classical archaeology or classics, or in related fields of the humanities or the fine arts. In addition to the 3.0 GPA required by the Graduate School, the department requires a GPA of 3.3 in the major field, a combined score on the quantitative and verbal

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sections on the GRE of at least 1000, and a score on the analytical writing section of at least 4.5; or a total score of at least 1500 on the GRE if taken prior to 2002, and at least three semesters of an appropriate foreign language.

Although an MA is a prerequisite for the PhD in both classical archaeology and art history, students should indicate in the initial application their interest in pursuing a doctorate.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Art History and Archaeology Program:

- Three letters of recommendation concerning academic qualifications to undertake graduate work
- A short statement of the applicant's professional goals and reasons for applying to do graduate work in art history or archaeology
- A copy of a recent term paper as a sample of your scholarship and writing
- Official GRE scores
- Curriculum vitae

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

About the Master's

The MA program in the Department of Art History and Archaeology has two primary goals: to provide graduate students with a strong background in the history of art, from antiquity to the present; and to introduce them to the methods and theories of material and visual analysis, as well as the practices of critical writing and reading. Students who pursue the thesis option have the opportunity to specialize at that stage.

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Graduation Requirements

Course Requirements

The successful completion of the MA requires at least thirty hours of coursework that must include: 8110: Introduction to Graduate Study; 8120: Theories and Methodologies; four distribution requirements that cover four broad periods of study: Ancient, Medieval and Renaissance, 1500-1850, and 1850-Present; and 8070: Master's Tutorial. If students are invited to pursue the thesis option, they must enroll in 8080: Master's Readings and 8090: Master's Research in place of 8070: Master's Tutorial. Courses for an interdisciplinary minor field will be in addition to these minimums.

Language Requirements

All students must demonstrate reading knowledge of one foreign language, usually German or a Romance language. In addition to the modern language, students in Classical Archaeology also must have reading knowledge of either Greek or Latin.

Master's Essay

To complete the degree, students must complete a scholarly essay under the guidance of a faculty advisor. It will most likely be a revision of a research paper from a graduate course taken in the Department of Art History and Archaeology.

Master's Essay Oral Examination

In consultation with the faculty advisor, students will select an additional member of the department faculty and a third member from outside the department to read the essay. Students will discuss their essays in a meeting chaired by their advisor.

Language Requirements

All students who pursue the thesis option must have reading knowledge of two modern languages: German and a Romance language. The department expects that the modern language requirement will be met by the end of the third semester for use in advanced coursework as well as thesis research and writing.

Thesis Option

Graduate students who intend to pursue doctoral work should complete the thesis option. This decision is made during the student's second or

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third semester in residence in consultation with the Director of Graduate Studies and three faculty members in the student's area of interest.

Master's Thesis Committee
The master's thesis committee consists of at least three people: the student's thesis advisor, a second member from within the department, and a third member from outside the department. The student should invite the latter two in consultation with his or her thesis advisor.

The committee must approve the thesis topic in the semester before the student plans to defend the thesis; often, this is accomplished during an interview for candidacy.

Master's Thesis
The master's thesis enables graduate students to engage in independent and thorough research in a specific area of study. While the thesis need not be an original contribution, neither can it be an uncritical compilation of published facts. A successful thesis will demonstrate the student's ability to use bibliography in the field; effectively utilize research tools and techniques; synthesize a variety of types of sources; and sustain an argument.

Master's Thesis Defense
The defense of the master's thesis is an oral examination, chaired by the student's advisor, which focuses specifically on the MA thesis. The student should submit a complete draft of the thesis to the advisor at least two months before the intended defense date and a final draft, approved by the advisor, to the entire committee 30 days before the defense. Any changes recommended by the committee during the defense must be made before the finished thesis can be submitted to the Graduate School.

More Information
Further guidelines are included in the department's graduate programs brochure or on the Web site.

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Doctorate Degree in Art History and Archaeology

Admission Contact Information

Kristin Schwain (schwaink@missouri.edu)
109 Pickard Hall; Columbia, MO 65211
573-882-6711

Admission Criteria

The department accepts as candidates for the Ph.D. students who have earned an M.A. or its equivalent in art history or classical archaeology, either from the University of Missouri-Columbia or from an institution recognized by the University. An M.A. thesis is a prerequisite for the Ph.D. in both art history and classical archaeology. The Doctoral Program Committee determines the acceptability of work completed elsewhere.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Art History and Archaeology Program:

- Three letters of recommendation concerning academic qualifications to undertake graduate work
- A short statement of the applicant's professional goals and reasons for applying to do graduate work in art history or archaeology
- A copy of a recent term paper as a sample of your scholarship and writing
- Official GRE scores
- Curriculum vitae

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Languages

All students must demonstrate reading knowledge of two foreign languages, usually German and a Romance language relevant to their area. Departmental language exams are offered in the fall semester of each year, although students can request an examination in the spring

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semester. Language requirements may be satisfied also by achieving a grade of B or better in a course approved by the Director of Graduate Studies.

In addition to the modern languages, students in classical archaeology must demonstrate reading knowledge of both Greek and Latin. This requirement may be satisfied by passing with a grade of B or better in a course numbered 7500 or higher in both Greek and Latin and by taking a second course at this level (7500 or higher) in the language more closely related to the major field of study. Equivalent courses taken at other institutions must be approved by the Director of Graduate Studies.

Graduation Requirements

The Graduate School requires a minimum of 72 hours for the Ph.D. At least 42 of those hours must be completed after the receipt of M.A. (48 for students who have an M.A. from another department or university and who have not taken 8110 and 8120 or their equivalent). Up to 30 hours from a previous institution can count toward the total of 72 hours. Most students will take more than the minimum number of courses and requirements

The 42/48 hours must include:

- At least one course from the following four areas—Ancient, Medieval and Renaissance, 1500-1850, and 1850-Present—unless students have taken an equivalent at the M.A. level.
- 27 hours of courses in the major areas. At least 12 of the 27 hours must be seminars at the 8000 level.
- 15 hours of coursework in the minor areas. At least 6 of the 15 hours must be taken at the 8000-level

Doctoral Committee

The Doctoral Program Committee is constituted in October during the first year of study. It consists of at least four people: the student's advisor; two additional scholars from within the department; and an outside committee member.

The Doctoral Program Committee determines the program of study throughout the student's time at the University of Missouri. It:

1. Reviews the student's M.A. thesis and determines it equivalency;
2. Accepts any transfer of credit from previous institutions

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3. Approves the plan of study;
4. Determines the major and minor areas as well as the scheduling of the comprehensive exams;
5. Approves the subject of the student's dissertation;
6. Examines and approves the student's dissertation.

Comprehensive Examination
The comprehensive examination in the major and minor areas of art history and archaeology, determined by the student and the doctoral program committee, consists of both written and oral examinations.

Dissertation
The dissertation is expected to be an original, scholarly contribution to the discipline. The topic must be approved by the advisor and Doctoral Program Committee. A dissertation proposal should be filed with members of the committee within two months of passing the comprehensive exams. A proposal for a dissertation fellowship will satisfy this requirement.

Individual chapters are generally submitted to the advisor as they are written. Other members of the Doctoral Program Committee may also criticize them in draft form. A complete, revised draft of the dissertation must be approved by the advisor at least two months before the defense. Students should distribute the final draft to each member of the Committee at least one month before the defense.

Students maintain continuous enrollment by registering for 9080 or 9090 and by submitting a progress report to their advisor each term. Dissertation advising is not normally available during the summer unless previous arrangements have been made.

Further guidelines, including available areas of doctoral study, are included in the department's web site.

Dissertation Defense
The final examination will be in the form of an oral defense of the dissertation. It must take place on or before the penultimate Friday of classes. Any changes recommended by the committee during the defense must be made and approved before the finished thesis can be submitted to the Graduate School. Students are responsible for

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ensuring they meet the deadlines and guidelines established by the Graduate School for dissertation submission and graduation.

Courses

See Art History and Archaeology (AR H A) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Biochemistry Graduate Programs

Contact Information

College of Agriculture, Food and Natural Resources; School of Medicine
117 Schweitzer Hall
573-882-4846
http://www.biochem.missouri.edu/

About Biochemistry

Biochemistry at the University of Missouri is a division of the College of Agriculture, Food and Natural Resources and a department of the School of Medicine. As a nationally ranked top 10 biochemistry department among public medical schools, we offer outstanding training that help students achieve their goals. We have 31 core faculty members and approximately 30 additional members, all of whom are available to mentor students in biochemistry. Nearly all facets of contemporary biochemical research are represented in their collective research interests. Our highly interactive program is an integral part of a campus-wide network of research programs including life sciences, genetics, nutrition, plant biochemistry and structural biology.

Degrees Offered

- MS and PhD in biochemistry
- Cooperative Degrees: PhD/MD in Biochemistry

Interdisciplinary Area Programs: PhD in the nutrition area program and PhD in the genetics area program. The graduate programs of the Department of Biochemistry prepare students for professional careers in academic institutions, industry and government. The Department of Biochemistry is administered by both the College of Agriculture, Food and Natural Resources, and the School of Medicine. It provides a great range of opportunities for multidisciplinary study in plant, animal and microbial biochemistry, molecular biology, structural biology, and chemical biology.

Faculty Research

Virtually every important area of biochemistry and molecular biology is represented among the research interests of the faculty. These

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interests focus on plant biochemistry, hormonal control of plant and animal-cell metabolism, growth-factor structure and function, enzyme reaction mechanisms, biochemistry of development, biochemistry of human disease, lipid and carbohydrate metabolism, molecular biology, analytical biochemistry, proteomics, systems biochemistry, and structural biochemistry.

Facilities
The department has modern, well-equipped laboratories in the Life Sciences Center, Schweitzer Hall, Schlundt Annex, and Stephens Hall. Additional faculty are housed in the Animal Sciences Research Center, Chemistry Building, Dalton Cardiovascular Research Center, Eckles Hall, Mason Eye Institute, Truman Veterans Hospital, and VA Hospital.

Plans of Study
All students participate in individually planned research programs and have a supervised teaching experience along with course work. Students are expected to complete a program of courses in biochemistry and selected courses in modern biology and chemistry.

Careers
Biochemistry at the University of Missouri provides world-class training that can open the door to a wide variety of career opportunities in the life sciences. Our graduates have career opportunities available academia, industry, agriculture or medicine.

Biochemistry Faculty

Gerald L. Hazelbauer
chair, professor, PhD, University of Wisconsin-Madison.

David W. Emerich
director of undergraduate studies and associate chair, professor, PhD, University of Wisconsin.

Brenda Peculis
director of graduate studies, associate professor, PhD, University of Illinois.

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Gary A. Weisman
director of graduate admissions, professor, PhD, University of Nebraska.

Lesa Beamer
associate professor, PhD, Johns Hopkins University.

Susan L. Deutscher
professor, PhD, St. Louis Medical School.

William R. Folk
professor, PhD, Stanford University.

Thomas Guilfoyle
professor, University of Illinois.

Mark Hannink
professor, PhD, University of California-San Diego.

Antje Heese
assistant professor, PhD, Michigan State University.

Dennis B. Lubahn
professor, PhD, Duke University.

Michael Henzl
professor, PhD, University of Wisconsin.

Mark E. Martin
director of medical education, associate professor, PhD, University of Mississippi Medical Center.

Thomas P. Mawhinney
associate professor, director of Agricultural Experiment Station Laboratories, PhD, Albany Medical College.

Bruce A. McClure
professor, PhD, University of Minnesota.

Scott Peck
associate professor, PhD, Michigan State University.

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Michael Petris
associate professor, PhD, University of Melbourne, Australia.

Charlotte Phillips
associate professor, PhD, North Carolina State University.

Thomas P. Quinn
professor, PhD, St. Louis University.

Douglas D. Randall
professor emeritus, PhD, Michigan.

Linda Randall
professor, PhD, University of Wisconsin.

Frank J. Schmidt
professor, PhD, University of Wisconsin

Grace Y. Sun
professor, PhD, Oregon State University.

Jay Thelen
assistant professor, PhD, University of Missouri.

Peter A. Tipton
professor, PhD, University of Wisconsin.

Richard Tsika
professor, PhD, University of California-Irvine.

Steve Van Doren
professor, PhD, University of Illinois.

Judy D. Wall
professor, PhD, Duke University.

Shuqun Zhang
associate professor, PhD, University of Texas-Austin.

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Xiaoqin Zou
assistant professor, PhD, University of California-San Diego.

Donald H. Burke
associate professor of molecular microbiology & immunology, PhD, University of California-Berkeley.

Shi-jie Chen
associate professor of physics, PhD, University of California-San Diego.

Kent Gates
professor of chemistry, PhD, Northwestern University.

Jan Miernyk
adjunct assistant professor, PhD, Arizona State University.

R. Michael Roberts
Curators' Professor of Animal Science, PhD, University of Oxford.

Krishna K. Sharma
professor of opthalmology, PhD, University of Mysore.

Marcelle Siegel
assistant professor, PhD, University of California, Berkeley.

Gary Stacey
MSMC Endowed Professor of Soybean Biotechnology, PhD, University of Texas.

Jack Tanner
professor of chemistry, PhD, Brown University.

Gretchen Hagen
research professor, PhD, University of Georgia.

Laurie Erb
research associate professor, PhD, University of Missouri.

Brian Mooney
research assistant professor, PhD, University College Dublin, Ireland.

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Valeri Mossine
research assistant professor, PhD, Academy of Science, Ukraine.

Agnes Simonyi
research associate professor, PhD, University of Lorand Eotvos, Hungary.

Shari Freyermuth
teaching assistant professor, PhD, Duke University.

Virginia E. Peterson
teaching associate professor, PhD, University of Maryland.

Application and Admission Information

Admission Criteria

- Fall deadline: January 15
- Minimum TOEFL score: 620/95 (paper/Internet)
- Minimum GRE score: N/A
- Minimum GPA: 3.0
- Undergraduate research required

Master's Degree in Biochemistry

Admission Contact Information

Stacy Colley (colleys@missouri.edu)
117 Schweitzer Hall; Columbia, MO 65211
573-882-4846

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Biochemistry Program:

- GRE scores
- Departmental application
- 3 letters of recommendation

Financial Aid from the Program

Some programs require an extra form or statement from those who

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wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Master of Science Degree

The Master of Science degree is awarded in part for the completion of a thesis.

Graduation Requirements

The minimum departmental course requirements for the Master of Science degree are:

- Introductory Graduate Biochemistry I or II (BIOCHM 9001-2,3)
- 3 additional hours of biochemistry or approved science course at 8000 level or above
- 2 hours of biochemistry seminar (9087)
- 4 hours of biochemistry research (9090)
- 1 graduate-level course in an area outside the department
- a biological research ethics course
- teaching experience for one semester (BIOCHM 9001-4)
- a total of 30 hours of 7000-9000 level course work
- a thesis based on original research
- an oral examination
- a public seminar based on thesis material and teaching experience

Rate of Progress

A satisfactory rate of progress must be maintained by master's and doctoral students. In addition to meeting the requirements for timely completion of the qualifying and comprehensive exam, each student must demonstrate, to the satisfaction of his/her adviser and doctoral program committee, that he/she is progressing in his/her thesis research. A student is expected to complete an MS degree within a 24 to 30-month period.

More Information

For information and for application forms, email gradprogram@missouri.edu or write the Director of Graduate Admissions in Biochemistry, 117 Schweitzer Hall, Columbia, MO 65211, or visit the Web site http://www.biochem.missouri.edu/.

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Doctorate Degree in Biochemistry

Admission Contact Information

Stacy Colley (colleys@missouri.edu)
117 Schweitzer Hall; Columbia, MO 65211
573-882-4846

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Biochemistry Program:

- GRE scores
- Departmental application
- 3 letters of recommendation

Financial Aid from the Program

All Biochemistry PhD students are guaranteed a stipend while they are making acceptable research progress. Additionally, tuition, health insurance fees, and incidental fees are covered for all qualifying full-time graduate students in Biochemistry. Our graduate student stipend is highly competitive by national standards, considering the low cost of living in Columbia.

Prerequisites

The following entrance requirements must be met:

- mathematics through one year of calculus
- biological sciences (at least one course)
- 1 year of physics
- 1 year of organic chemistry (with a laboratory)
- biochemistry (lecture and laboratory)

Recommended Courses

- 1 genetics course
- quantitative analysis
- 1 physical chemistry course with a calculus prerequisite

These prerequisites should have been met during the undergraduate curriculum. Recommended courses may be taken during the first year of the graduate program. Satisfactory completion of a comprehensive

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examination is expected by the end of the second academic year in graduate study.

Graduation Requirements
The minimum departmental course requirements for the PhD are 14 hours of science course at the 8000 level or above. Two of these courses (4h each) must be Introductory Graduate Biochemistry I and II (BIOCHM 9001-2,3). Additionally requirements include four hours of seminar (9087), a biological research ethics course, one semester of teaching experience (BIOCHM 9001-4), a dissertation based upon original research, a thesis seminar and a final examination. The program qualifier will take place by the third semester following matriculation. The purpose of the program qualifier is for the student to meet with his/her doctoral program committee to review the course work and research plan.

Comprehensive Examination
The comprehensive exam is given in two parts. The oral comprehensive exam tests general biochemistry knowledge and is based upon 20 conceptual questions made available to the students upon matriculation. A comprehensive exam committee administers the oral at the end of the student's second semester following matriculation, provided Introductory Graduate Biochemistry I and II courses have been completed with grades of B or better. Failure to complete the oral comprehensive exam by the end of the fourth semester following matriculation may result in dismissal from the PhD program. The written examination is a written proposal of the PhD project of the student that must be defended before the student's doctoral program committee. This portion must be completed no later than the end of the fourth semester following matriculation.

Rate of Progress
A satisfactory rate of progress must be maintained by master's and doctoral students. In addition to meeting the requirements for timely completion of the qualifying and comprehensive exam, each student must demonstrate, to the satisfaction of his/her adviser and doctoral program committee, that he/she is progressing in his/her thesis research. The average residency of a student with a baccalaureate degree is 5.5 years.

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MD/PhD Dual Degree Programs
Students already accepted into the School of Medicine at MU may apply to the Department for acceptance into the MD/PhD program. Students matriculating in the MD/PhD degree program must complete degree requirements of both the School of Medicine and the Graduate School.

More Information
For information and for application forms, email gradprogram@missouri.edu or write the Director of Graduate Admissions in Biochemistry, 117 Schweitzer Hall, Columbia, MO 65211, or visit the Web site http://www.biochem.missouri.edu/.

Courses

See BIOCHEMISTRY (BIOCHM) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Biological Engineering Graduate Programs

Contact Information

College of Agriculture, Food and Natural Resources
256 William Stringer Wing
Columbia, MO 65211-5160
573-882-4113
http://bioengineering.missouri.edu/

College of Engineering
256 William Stringer Wing
Columbia, MO 65211-5160
573-882-4113
http://bioengineering.missouri.edu/

About Biological Engineering

Recognizing the immense promise of bioengineering and the unique position of MU for a strong bioengineering program, the College of Agriculture, Food and Natural Resources (CAFNR) and the College of Engineering (CoE) joined forces to form the department of Biological Engineering (BE). BE unites existing faculty and infrastructure from both colleges. CoE contributes biomedical engineering capabilities while CAFNR brings strengths in bioprocess and bioenvironmental engineering. Biological Engineering confers both master's and doctoral degrees to students who satisfy the general requirements of the Graduate School and the specific requirements for the master's degree and the doctoral degree of the Biological Engineering Department.

Degrees offered

- Master of Science (MS)
- Master of Engineering (ME)
- Doctor of Philosophy (PhD)

Thesis Research and Funding

Research assistantships are available to qualified graduate students. Thesis research may emphasize bioprocessing, biomedical engineering,

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environmental engineering or precision agriculture. Laboratories are well equipped for research in biomaterials, biomedical optics, bioprocessing, biosensors, computer vision, electrophysiology, food extrusion, properties of biological and food materials, process control, GIS, precision agriculture, water quality, wetlands, chemical application technology, soil physics, hydrology and renewable energy.

Biological Engineering Faculty

Jinglu Tan
chair, professor, PhD, University of Minnesota. Biological system modeling and identification, bioluminescence-based sensing, and bioimage processing.

Steven C. Borgelt
director of undergraduate studies, associate professor, PhD, Texas A&M University. Machine design, sensors, and controls; renewable energy.

Fu-hung Hsieh
director of graduate studies, professor, PhD, University of Minnesota. Bioprocessing, viscoelastic properties of biomaterials, food engineering.

David Brune
professor, PhD, University of Missouri. Agricultural Engineering.

Michael Davis
professor, PhD, (Medical Pharmacology and Physiology), University of Nebraska Medical Center, Omaha. Vascular mechno-transduction, electrophysiology, blood flow autoregulation, lymphatic physiology.

Willard Downs
professor, PhD, Oklahoma State University. Material handling, environmental processes, extension.

Shubhra Gangopadhyay
LaPierre Chair and professor, PhD, (electrical and computer engineering), Indian Institute of Technology, Kharagpur. BioMEMS and nanotechnology.

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Kevin Gillis
associate professor (Dalton Cardiovascular Research Center), DSc, Washington University, St. Louis. Electrical engineering, biomedical engineering, electrophysiology, processing of biological signals.

Michael Hill
professor, PhD, (associate director, Dalton Cardiovascular Research Center, Medical Pharmacology and Physiology), University of Melbourne. Microcirculation, smooth muscle mechanotransduction and signaling events, Ca2+ signaling in smooth muscle.

Tzyh-Chang Hwang
professor (physiology), MD, National Yang-Ming Medical College, Taiwan; PhD, Johns Hopkins University School of Medicine. Ion channel biophysics.

Andrew McClellan
professor, PhD, (biological science), Case Western Reserve University. Cellular studies of functional neural regeneration following spinal cord injury.

Gerald Meininger
adjunct professor, PhD, (director, Dalton Cardiovascular Research Center, Medical Pharmacology and Physiology), University of Missouri. Vascular physiology and cell biology with an emphasis on the microvasculature.

Kristina Narfstrom
endowed professor of Veterinary Ophthalmology, DVM, PhD, University of Linkoping Medical School. Retinal cell biology, electrophysiological techniques, intraocular microsurgery.

E. John Sadler
adjunct professor, PhD, Texas A&M University. Soil and water conservation, soil water relations, irrigation, site-specific agriculture, water quality, process-level computer modeling.

Leon G. Schumacher
professor, PhD, Iowa State University. Agricultural mechanics, agricultural systems management, biofuels.

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Steven Segal
adjunct professor, PhD, University of Michigan, Ann Arbor. Control of tissue blood flow in the living microcirculation with an emphasis on arterioles supplying skeletal muscle fibers, optical imaging and electronic recording techniques complemented by molecular biological analyses.

Kenneth A. Sudduth
adjunct professor, PhD, University of Illinois. Sensors and controls for crop production and environmental management, precision agriculture systems.

David E. Baker
associate professor, certified safety professional, (assistant dean and program director, agriculture and natural resources extension), MS, Illinois State University. Occupational safety and health.

Sheila A. Grant
associate professor, PhD, Iowa State University. Biomedical engineering, external and implantable biosensors, nanopatterning techniques, biomaterial interfaces.

Li-Qun (Andrew) Gu
associate professor, PhD, Nankai University. Single molecule detection, biosensor, bio-membrane technology, ion channel biophysics, protein engineering.

William A. Jacoby
associate professor, PhD, University of Colorado-Boulder. Thermochemical conversion of biomass into fuels and chemicals, high temperature and pressure processes, supercritical fluids, indoor air quality, photocatalysis.

James Lee
associate professor, PhD, University of Pennsylvania. Molecular and cellular biomechanics, molecular organization of cytoskeleton, self-assembled bilayer membranes.

Allen Thompson
associate professor, PhD, University of Nebraska. Irrigation management, erosion mechanics, wetland hydrology.

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John A. Viator
associate professor, PhD, Oregon Health & Science University. Biomedical engineering, biomedical optics, photoacoustic imaging, laser applications in dermatology, burn injury, and oncology.

Gang Yao
associate professor, PhD, Texas A&M University. Biomedical optics, laser tissue interaction, optical coherence tomography, ultrasound modulated optical tomography, signal and image processing.

Shinghua Ding
assistant professor, PhD, State University of New York at Buffalo. Neuroscience, stem cell engineering, in vivo imaging, fluorescent imaging, electrophysiology.

A. Bulent Koc
assistant professor, PhD, Penn State. Biofuel production systems; measurement, instrumentation and control; process optimization; mechatronics in agriculture.

Luis Polo-Parada
assistant professor, PhD, (Medical Pharmacology and Physiology), Case Western Reserve University. Electrical activity in regions of the heart, role of cell adhesion molecules in the development of diabetes type II.

Shramik Sengupta
assistant professor, PhD, University of Minnesota-Minneapolis. Rapid, multi-frequency impedance detection of bacterial proliferation and antibiotic susceptibility.

Joseph Zulovich
extension assistant professor, PhD, PE, University of Nebraska-Lincoln. Structures, animal housing, commercial agriculture.

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Master of Science in Biological Engineering

Master of Engineering in Biological Engineering

Admission Contact Information

JoAnn Lewis (lewisj@missouri.edu)
256 William Stringer Wing; Columbia, MO 65211-5160
573-882-4113

Admission Criteria

- Fall deadline: N/A
- Minimum TOEFL score: 550/80 (paper/internet) and 6.0 Academic IELTS score
- Minimum GRE score: Preferred V+Q=1100, 4.0 analytical writing
- Minimum GPA: 3.0 in the last 60 hours
- BS in engineering from an accredited university or equivalent experience

Required Application Materials

Prospective students first contact JoAnn Lewis in the BE department to receive instructions on the documents needed for a complete application packet.

To the Graduate School:

- All required Graduate School documents

Applicants must also arrange for official transcripts, TOEFL score, GRE score, to be sent directly to :
Graduate Admissions
University of Missouri
210 Jesse Hall
Columbia, MO 65211-1300

To the Master's BE Program:
Contact JoAnn Lewis.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

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Graduation Requirements for Master of Science in Biological Engineering

Students without a BS in engineering will be required to complete additional courses in mathematics, basic sciences and engineering science. Students with engineering degrees other than biological engineering should meet certain proficiency requirements.

An MS student must complete a minimum of 30 credit hours of graduate work with at least 15 hours in 8000-level courses. A maximum of 40 percent of the total credit hours may be in research or special problems. A thesis is required.

Graduation Requirements for Master of Engineering in Biological Engineering

An ME student must complete a minimum of 36 credit hours of graduate work. At least 15 hours must be in 8000-level courses and a minimum of 21 hours must be from the College of Engineering. The student must maintain at least a 3.0 cumulative GPA and complete the program in eight years. A project may be required by the adviser.

For additional information about either the MS or ME in Biological Engineering:
Master of Science in Biological Engineering
Master of Engineering in Biological Engineering

Doctorate Degree in Biological Engineering

Admission Contact Information

JoAnn Lewis (lewisj@missouri.edu)
256 William Stringer Wing; Columbia, MO 65211-5160
573-882-4113

Admission Criteria for Doctorate Degree in Biological Engineering

- Fall deadline: N/A
- Minimum TOEFL score: 550/80 (paper/internet) and 6.0 Academic IELTS score
- Minimum GRE score: Preferred V+Q=1100, 4.0 Analytical Writing
- Minimum GPA: 3.0
- BS and MS in engineering from an accredited university or

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equivalent experience. In rare instances, an exceptional student will be allowed to study for the PhD without first completing an MS degree.

Required BE Doctorate Degree Application Materials

To the Graduate School:

- All required Graduate School documents

Applicants must also arrange for official transcripts, TOEFL score, GRE score, to be sent directly to:
Graduate Admissions
University of Missouri
210 Jesse Hall
Columbia, MO 65211-1300

To the Doctoral's BE Program:
Contact JoAnn Lewis.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Degree Requirements Doctorate Degree in Biological Engineering

Within the first year in the program, each PhD student must pass a qualifying examination before continuing enrollment. The exam is designed to test the student's ability to undertake advanced learning and carry out independent research. A doctoral candidate must complete a minimum of 72 credit hours of course work beyond the BS degree with a minimum of fifteen hours (exclusive of research, problems or independent study courses) must be at the 8000 (graduate) level, including at least three BE courses. In addition, there will be a minimum of one hour of Seminar (one hour of BE 8087) and BE 9990 may not exceed 28 hours of the total 72 hours required in the PhD Program of Study. The courses and research plan must be approved by the doctoral program committee. The student is required to pass a comprehensive examination, which includes both written and oral components. The student must demonstrate his or her ability for in-depth research by presenting and successfully defending a dissertation

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embodying the results of original research. A foreign language is not required.

Courses

See Biological Engineering (BIOL EN) graduate courses in the myZou online system.

Note: The Agricultural Systems Management courses (AG S M) are restricted and not open to all BE students. Students completing the former Agricultural Systems Management degree should contact the department for information about these courses.

END OF PROGRAM DESCRIPTION

Biological Sciences Graduate Programs

Contact Information

College of Arts and Science
218 Tucker Hall
1-800-553-5698
http://biology.missouri.edu

About Biological Sciences

The Division of Biological Sciences offers a unique integration of world-class research, award-winning graduate and undergraduate training, and outstanding community outreach. Our research mission includes the acquisition of new knowledge through basic research, and coordinated translational research to improve human health, our food supply, and our environment. Graduate training programs emphasize the excitement of discovery and the development of individual creativity and critical reasoning skills, with graduate mentors who are experts at the frontiers of their field. Because science exposure in the pre-college years is critical to the development of both scientists and informed citizens, we also offer special outreach programs for secondary school science teachers and their students in Missouri.

The division is housed in Tucker Hall, Lefevre Hall and the Life Sciences Center, all of which are next to buildings that house the Chemistry and Physics Departments and related departments in the College of Agriculture, Food and Natural Resources and the School of Natural Resources. The School of Medicine and the College of Veterinary Medicine are within a short walking distance. Campus research units with which the division has cooperative research programs include the Dalton Cardiovascular Research Center, the Research Reactor Center, the Laboratory for Biological Control of Insects, the Cancer Research Center, the Eye Research Center and the Agricultural Experiment Station Laboratories.

Besides the specialized equipment in each faculty research laboratory, departmental equipment and facilities available to graduate students include:

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- a 250,000-specimen herbarium;
- a new 15,000-square-foot greenhouse complex;
- a 14-acre botany preserve on the campus and a 146-acre prairie research station;
- 24 walk-in plant growth chambers with regulated light, temperature and humidity controls;
- animal-care facilities suitable for bats, rats, rabbits and amphibians;
- cell and tissue culture facilities;
- growth chambers;
- DNA sequencing and recombinant DNA facilities;
- scanning spectrophotometers and kinetic fluorimeters;
- ultracentrifuges;
- HPLC facilities;
- sound isolation acoustic chambers;
- neurophysiological recorders, oscilloscopes and amplifiers; and
- microneurosurgery facilities and equipment.

Divisional faculty have ready access to the campus computing network and microcomputers in their laboratories.

Biological Sciences Faculty

John D. David
director, associate professor, PhD, Vanderbilt University.

Gerald Summers
associate director, associate professor, PhD, University of Illinois.

Emmanuel Liscum
director of graduate recruitment, professor, PhD, The Ohio State University.

Raymond Semlitsch
director of graduate studies, Curators' Professor, PhD, University of Georgia.

James Birchler
Curators' Professor, PhD, Indiana University.

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H. Carl Gerhardt
Curators' Professor, PhD, University of Texas-Austin.

George Smith
Curators' Professor, PhD, Harvard University.

Fred vom Saal
Curators' Professor, PhD, Rutgers University.

Steven Alexander
professor, PhD, Brandeis University.

John Faaborg
professor, PhD, Princeton University.

Candace Galen
professor, PhD, University of Texas-Austin.

Philip Jen
professor, PhD, Washington University in St. Louis.

Mark Kirk
professor, PhD, Rice University.

Andrew McClellan
professor, PhD, Case Western Reserve University.

Kathleen Newton
professor, PhD, Indiana University.

Thomas E. Phillips
professor, PhD, Northwestern University.

David Setzer
professor, PhD, Stanford University.

John Walker
professor, PhD, University of Georgia.

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Anand Chandrasekhar
associate professor, PhD, University of Iowa.

David Braun
associate professor, PhD, University of Missouri.

Rex Cocroft
associate professor, PhD, Cornell University.

Miriam Golomb
associate professor, PhD, University of California-Berkeley.

Timothy Holtsford
associate professor, PhD, University of California-Riverside.

Joel Maruniak
associate professor, PhD, University of Texas-Austin.

Paula McSteen
associate professor, PhD, University of East Anglia.

Johannes Schul
associate professor, PhD, Philipps University, Marburg, Germany.

David Worcester
associate professor, PhD, Harvard University.

Troy Zars
associate professor, PhD, University of Notre Dame.

Dawn Cornelison
assistant professor, PhD, California Institute of Technology.

Lori Eggert
assistant professor, PhD, University of California-San Diego.

Michael Garcia
assistant professor, PhD, Mayo Graduate School.

continued on next page

Ricardo Holdo
Assistant professor, PhD, Princeton University.

J. Christopher Pires
assistant professor, PhD, University of Wisconsin-Madison.

David Schulz
assistant professor, PhD, University of Illinois, Urbana-Champaign.

Patrick Shiu
assistant professor, PhD, University of British Columbia, Canada.

Change Tan
assistant professor, PhD, University of Pennsylvania at Philadelphia.

Samuel Waters
assistant professor, PhD, University of Virginia.

Admission Criteria

- Fall deadline: January 15
- Minimum TOEFL score: 600/100 (paper/internet)
- Minimum GRE score: verbal + quantitative = 1200

The Division of Biological Sciences actively recruits outstanding graduate students from both national and international pools. Selected candidates are interviewed. The best are admitted to the Division for graduate study. Our 2010 PhD class averaged the 62nd percentile on the GRE verbal, the 60th percentile on the GRE quantitative with a 3.4 grade point average. Even more important than the quantitative scores, our 2010 class also presented evidence of critical qualitative characteristics including: undergraduate research experiences and presentation of research results; ability to face and overcome obstacles; exceptional motivation, work ethic, intellectual vitality, initiative, creativity, critical thinking ability and leadership ability.

Required Application Materials
To the Graduate School:

- All required Graduate School documents

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To the Biological Sciences Program:

- Application form
- All required documents
- GRE test scores
- Reference letters

Areas of Study

The division offers both master's and PhD degrees. General areas of research emphasis within the division include evolutionary biology, ecology and behavior; genetic, cellular, molecular and developmental biology; neurobiology and behavior; and plant sciences. Within these general areas, students may devise more specific graduate programs in, for example, plant genetics, invertebrate chemical communication or neurophysiology.

Interdisciplinary Research

Several students are currently involved in interdepartmental programs in neurosciences, genetics, plant biochemistry and physiology, cellular and molecular biology, the Conservation Biology Program, microbiology and physiology. In addition, the presence on this campus of a School of Medicine, College of Agriculture, Food and Natural Resources and College of Veterinary Medicine provides opportunities for direct interaction with a variety of established research scientists. Faculty in the Division also participate in the Genetics Area Program, the Pathobiology Area Program, the Molecular Biology Program, the Interdisciplinary Program in Plant Biochemistry and Physiology, the Interdisciplinary Neuroscience Program and the Conservation Biology Program.

Eligibility

All entering graduate students should have a broad background in biology and should have completed courses in mathematics through integral calculus, chemistry through organic chemistry and a year of physics.

Exceptions may be made for individual students. Outstanding students with undergraduate degrees in areas other than biology (such as chemistry, physics, engineering, mathematics or psychology) are encouraged to apply with the understanding that subject matter in biology will be addressed in the first year of graduate study.

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Funding
Financial support is available through research training grants, fellowships, scholarships, or graduate research/teaching assistantships.

Courses

See Biological Sciences (BIO SCI) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Biomedical Sciences Area Program (MS, PhD and Dual Degrees)

Contact Information

E-102 Veterinary Medicine Building
573-882-7305
http://www.dbms.missouri.edu/

About Biomedical Sciences Area Graduate Programs

Please refer to individual sections below on the master of science, doctorate degree, or dual degrees.

Degrees Offered

- MS in Basic Biomedical Sciences: application requirements and program details
- PhD Area Program: application requirements and program details
- Dual PhD/DVM or MS/DVM Degrees

Areas of Study

Major biomedical disciplines include anatomy (gross or microscopic); physiology/pharmacology (molecular, cellular and integrative); biochemistry/molecular biology; endocrinology; and toxicology. Specific areas of interest are exercise biology including cardiac, vascular and muscle biology; cardiovascular biology including neuroendocrine regulation; membrane transport biology including cystic fibrosis and cardiac disease; and reproductive biology including environmental estrogen toxicities and developmental processes.

Financial Support

Qualified graduate students may obtain financial support from several sources. The program offers stipend support and tuition fee waivers on a competitive basis throughout the year. University fellowships are available on a competitive basis but have deadlines set early each year. Therefore, prospective candidates should submit an application to the department in the preceding fall. In addition, students may be supported by faculty research grants.

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Biomedical Sciences Faculty

M. Harold Laughlin
professor and chair, professor, Department of Pharmacology and Physiology, School of Medicine; research investigator, Dalton Cardiovascular Research Center; PhD, University of Iowa.

Ronald L. Terjung
professor and associate chair, associate dean for research and post-graduate affairs, College of Veterinary Medicine, professor, Department of Pharmacology and Physiology, School of Medicine; research investigator, Dalton Cardiovascular Research Center; PhD, University of Iowa.

Chris P. Baines
assistant professor, research investigator, Dalton Cardiovascular Research Center; PhD, University of South Alabama.

Frank W. Booth
professor, research investigator, Dalton Cardiovascular Research Center; adjunct professor, physiology; PhD, University of Iowa.

Douglas K. Bowles
associate professor and director of graduate studies, research investigator, Dalton Cardiovascular Research Center; PhD, University of Texas-Austin.

Trenton Boyd
AHIP, adjunct assistant professor; MA, University of Missouri.

Mary Beth Brown
adjunct professor; BSPT, Russell Sage College; MS, PhD, University of Southern California.

Lane L. Clarke
professor; research investigator, Dalton Cardiovascular Research Center; DVM, University of Missouri; PhD, North Carolina State University.

Gheorghe M. Constantinescu
professor; DVM, PhD, Drhc, University of Bucharest.

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Ileana A. Constantinescu
clinical associate professor, DVM, MS.

David Cross
assistant teaching professor, DVM, University of Missouri; PhD, The Ohio State University.

John R. Dodam
professor and chair of veterinary medicine and surgery, College of Veterinary Medicine; diplomate, American College of Veterinary Anesthesiologists; DVM, The Ohio State University; PhD, North Carolina State University.

Craig Emter
assistant professor, PhD, University of Colorado-Boulder.

Brian L. Frappier
clinical associate professor; DVM, Michigan State University; PhD, The Ohio State University.

Venkataseshu K. Ganjam
professor; professor, veterinary medicine and surgery; research investigator, Dalton Cardiovascular Research Center; BVSc, SV University-India; PhD, Oklahoma State University.

Eileen M. Hasser
professor, research investigator, Dalton Cardiovascular Research Center; adjunct associate professor, neurobiology, College of Medicine, Northeastern Ohio University; PhD, University of Oklahoma.

Cheryl M. Heesch
professor, research investigator, Dalton Cardiovascular Research Center; PhD, University of Texas Health Science Center.

Virginia H. Huxley
adjunct professor; professor, physiology; PhD, University of Virginia.

Salman Hyder
professor, research investigator, Dalton Cardiovascular Research Center; PhD, University of Glasgow.

continued on next page

Gary S. Johnson
adjunct associate professor; associate professor, veterinary pathobiology; DVM, University of Missouri; PhD, Kansas State University.

David D. Kline
assistant professor, research investigator, Dalton Cardiovascular Research Center; PhD, Case Western Reserve University.

M. Cathleen Kuehl-Kovarik
assistant professor, DVM, Colorado State University; PhD, Iowa State University.

Chada S. Reddy
associate professor, BVSc, Andhra Pradesh Agricultural University; PhD, University of Mississippi.

Cheryl S. Rosenfeld
assistant professor, research investigator, Life Sciences Center; DVM, University of Illinois Champaign-Urbana; PhD, University of Missouri.

George E. Rottinghaus
adjunct associate professor, PhD, Iowa State University.

Leona J. Rubin
associate professor, research investigator, Dalton Cardiovascular Research Center; PhD, University of Colorado.

James C. Schadt
associate professor, research investigator, Dalton Cardiovascular Research Center; PhD, Texas Tech University.

Steven S. Segal
adjunct professor; PhD in Physiology and Education, University of Michigan.

Richard Tsika
professor, research investigator, Life Sciences Center; PhD, University of California-Irvine.

continued on next page

Wade V. Welshons
associate professor, PhD, Harvard University.

Steve (Hsiao-Tung) Yang
research professor; PhD, Brigham Young University.

Master of Science in Basic Biomedical Sciences

Admission Contact Information

http://www.dbms.missouri.edu/
1600 Rollins Road, E102 Veterinary Medicine Building
Columbia, MO 65211
573-882-7305

About the Program

The MS program in Basic Biomedical Sciences provides in-depth training to prepare scientists in interdisciplinary basic research (molecular, cellular, organ and integrative). Departmental faculty members represent diverse Medical-related basic science disciplines that provide a unique opportunity for biomedical research training. Core courses include physiology, cell biology and an introduction to research methodology. The multidisciplinary focus of the program is also emphasized in the candidate's MS program committee.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Admission Criteria

- Fall deadline: February 1
- Spring deadline: September 1
- Summer deadline: Not Applicable
- Minimum TOEFL score: 600/250/100 (paper/computer/internet)
- Minimum GRE score: Preferred V+Q=1000, 3.5 on analytical writing
- Minimum GPA: 3.0
- Required prerequisite courses: Biology (10 hrs), Physics (3 hrs), Biochemistry (3 hrs), Chemistry (10 hrs), Calculus (3 hrs)

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The GRE requirement may be waived for applicants with an MD or DVM. Prerequisite courses may be completed during the master's program.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Biomedical Sciences MS Program:

- Program-specific application
- Letter of intent
- GRE scores
- Copy of transcripts
- 3 letters of recommendation

MS Degree Requirements

To attain the master's degree, 30 hours of graduate credit must be completed; 15 hours or more shall be 8000 level (exclusive of research, problems and independent study courses); and 6 to 9 hours of 8090 Research. A grade of 3.0 or better is required in all core courses and serves as the qualifying examination for the degree. In additional to the departmental core courses, students may take courses specifically planned to meet the needs and strengths of the individual.

Evaluation

The master's candidate is evaluated semiannually for satisfactory rate of progress as defined by timely completion of course courses and progress on research activities as stipulated by the master's program committee. The master's candidate must carry out original research culminating in a written thesis, present the thesis work at a departmental seminar and defend the thesis in an oral examination by the master's program committee.

Length of Study

The time limit for the master's degree is five years after initiating the program.

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Doctorate in Biomedical Sciences Area (PhD)

Admission Contact Information

http://www.dbms.missouri.edu/
1600 Rollins Road, E102 Veterinary Medicine Building
Columbia, MO 65211
573-882-7305

About the Doctoral Degree Program

The Biomedical Sciences Area PhD is a multidisciplinary program that integrates molecular, cellular and systemic biology within the context of biomedical research. The program provides the student with the background to investigate questions relevant to the Medical sciences at the integrative, molecular or cellular level and to relate the findings to mammalian physiology. Training in both fundamental and state-of-the-art research methodologies help students develop the skills necessary for competitive biomedical research. The program is administered through the Department of Biomedical Sciences (College of Veterinary Medicine) that has research faculty representing a diversity of Medical-related basic science disciplines, including anatomy, biochemistry, histology, pathology, molecular biology, physiology, pharmacology and toxicology. The program offers a rich environment for graduate study and a unique opportunity for training scientists in comprehensive interdisciplinary research.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Admission Criteria

- Fall deadline: February 1
- Spring deadline: September 1
- Summer deadline: Not Applicable
- Minimum TOEFL score: 600/250/100 (paper/computer/internet)
- Minimum GRE score: Preferred V+Q=1000, 3.5 on analytical writing
- Minimum GPA: 3.0
- Required prerequisite courses: Biology (10 hrs), Physics (3 hrs), Biochemistry (3 hrs), Chemistry (10 hrs), Calculus (3 hrs)

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The GRE requirement may be waived for applicants with an MD or DVM.

Degree Requirements
To attain the PhD degree, 72 hours of graduate credit must be completed:
15 hours or more at the 8000/9000 level (exclusive of research, problems and independent study courses)

The core curriculum includes:
- physiology (10 credit hours)
- biochemistry/cell biology or histology (4 or 5 credit hours, respectively)
- multidisciplinary approaches to biomedical research (2 credit hours)
- departmental seminar (2 credit hours)

Minimum of 1 additional 7000-level course in each of the following areas:
- molecular biology
- cellular biology
- integrative biology

Rate and Quality of PhD Progress
A grade of 3.0 or better is required in the core curriculum and serves in lieu of a qualifying examination for the degree. The choice of additional courses will be made individually by the student in consultation with his/her adviser and doctoral program committee. Following completion of the plan of study, candidates for the PhD degree must pass a comprehensive examination designed by the doctoral program committee that reflects an understanding of the multidisciplinary approach to biomedical research. The PhD candidate is evaluated semiannually by a faculty committee to ensure a satisfactory rate of progress as defined by timely completion of core courses and productivity in research activities as stipulated by the student's doctoral program committee. The PhD candidate must carry out original research culminating in a written dissertation, present the dissertation work at a departmental seminar and defend it in an oral examination given by the doctoral program committee. The program for the PhD degree must be completed within five years of passing the comprehensive examination.

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Dual Degrees: Biomedical Sciences and Veterinary Medicine

Contact Information

http://www.dbms.missouri.edu/
1600 Rollins Road, E102 Veterinary Medicine Building
Columbia, MO 65211
573-882-7305

About the Program

The Biomedical Sciences graduate programs enable veterinary medical students to pursue studies in the basic biomedical discipline of their choice for a PhD or MS degree while enrolled in the College of Veterinary Medicine. The program is designed to prepare students for advanced professional careers in universities and colleges, research institutes and industrial research.

With consent of the student's graduate program committee, courses from the professional curriculum (which includes a major portion of the core curriculum) can be accepted toward the graduate degree.

Doctoral Program

The PhD program requires a minimum of 30 credit hours of 9090 Research culminating in completion of original research and defense of a written dissertation.

Dual Master's Degree for Veterinary Medicine

The master's/DVM program enables veterinary medical students to complete a master's degree while enrolled in the College of Veterinary Medicine. The program allows qualified students to seek in-depth involvement in the basic biomedical discipline of their choice. Six hours of 9090 Research that result in an original thesis are required. Financial support may be provided to VM2-4 students through teaching assistantships in gross anatomy laboratory (Veterinary Anatomy 5500 and 5501).

Areas of Study

Major biomedical disciplines include anatomy of domestic species (gross or microscopic); physiology/pharmacology (molecular, cellular and integrative); biochemistry/molecular biology; endocrinology;

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and toxicology. Specific areas of interest are exercise sciences; cardiovascular and neurosciences; muscle biology; membrane transport biology; reproductive biology; and developmental toxicology.

Admission Contact Information
http://www.dbms.missouri.edu/
1600 Rollins Road, E102 Veterinary Medicine Building
Columbia, MO 65211
573-882-7305

Admission Criteria
- Fall deadline: February 1
- Spring deadline: September 1
- Summer deadline: Not Applicable
- Minimum TOEFL score: 600/250/100 (paper/computer/internet)
- Minimum GRE score: Preferred V+Q=1000, 3.5 on analytical writing
- Minimum GPA: 3.0

Required prerequisite courses: Biology (10 hrs), Physics (3 hrs), Biochemistry (3 hrs), Chemistry (10 hrs), Calculus (3 hrs)

Required Application Materials
To the Graduate School:
- All required Graduate School documents

To the Program (www.dbms.missouri.edu):
- Program-specific application
- Letter of intent
- Copy of GRE scores
- Copy of transcripts
- 3 letters of recommendation
- GRE scores

Courses

See Veterinary Biomedical Sciences (V BSCI) graduate courses in the myZou online system.

Note: The myZou system shows courses offered for both MS and

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PhD in biomedical sciences, as well as the dual degree programs in biomedical sciences and veterinary medicine. Students must check with an adviser to see which courses are appropriate for each plan of study.

END OF PROGRAM DESCRIPTION

Biomedical Science Master of Science: Comparative Medicine emphasis

Please Note: This is a Post-DVM Master of Science Degree

Contact Information

Research Animal Diagnostic Laboratory Rm N128
4011 Discovery Drive
Columbia, MO 65201
573-882-6628
http://www.radil.missouri.edu/info/cmp/

About This Degree

This postdoctoral (post-DVM) program prepares graduates for careers in comparative medicine. This graduate program can be coupled with residency training and meet the requirements for eligibility for the American College of Laboratory Animal Medicine (ACLAM) certification examination.

Programmatic Strengths

The opportunity for comparative studies in a joint veterinary medical and human medical environment The multidisciplinary nature of the faculty participating in the training program The potential to couple training in research with residency training in comparative pathology, diagnostics, laboratory animal medicine and training toward board certification Strong research resources including AAALAC-accredited research animal facilities, a full-service, internationally-recognized research animal diagnostic laboratory, and NIH-funded research resource centers for mice, rats and swine
A long history of successful training in comparative medicine

Class Size & Resources

Typically there are 10-14 postdoctoral trainees in the program at once. Networking and sharing of experiences and cooperation among trainees is an important factor in the success of the program.

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Comparative (Veterinary) Medicine Faculty

Craig L. Franklin
director of graduate studies, associate professor of veterinary pathobiology, DVM, PhD, University of Missouri.

Beth Bauer
clinical assistant professor of veterinary pathobiology, DVM, University of Tennessee.

Cynthia L. Besch-Williford
associate professor of veterinary pathobiology, DVM, Louisiana State University, PhD, University of Missouri.

Elizabeth C. Bryda
associate professor of veterinary pathobiology, PhD, Rutgers University.

John K. Critser
endowed professor of comparative medicine, PhD, University of Wisconsin.

Lonny W. Dixon
director, office of animal resources, DVM, MS, University of Missouri.

Robert S. Livingston
clinical associate professor of veterinary pathobiology, DVM, University of Illinois, PhD, University of Missouri.

Matthew H. Myles
research assistant professor of veterinary pathobiology, DVM, Colorado State University, PhD, University of Missouri.

Lela K. Riley
professor of veterinary pathobiology, PhD, University of Kansas.

Earl K. Steffen
research assistant professor of veterinary pathobiology, PhD, University of Missouri.

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Admission Contact Information

Craig Franklin, DVM, PhD
Research Animal Diagnostic Laboratory Rm N128
4011 Discovery Drive
Columbia, MO 65201
573-882-6623

Admission Criteria

Fall deadline: N/A

- DVM or equivalent from an accredited college of veterinary medicine or successful completion of the foreign equivalency examination and approval by the Comparative Medicine Program faculty
- Meet standards for admission to the Graduate School

Required Application Material

To the Graduate School:

- All required Graduate School documents

To the CMP Postdoctoral MS Program:

- Curriculum vitae
- Statement of career goals and interests
- Complete transcripts
- Graduate Record Examination Scores (if available)
- Names and addresses of three persons to be contacted for letters of evaluation

Degree Requirements

The CMP emphasizes comparative medicine research training and includes graduate course work. Research training is performed under an established investigator in one of several life science departments on the MU campus. Recommended graduate courses include pathology of laboratory animals, methodology of animal experimentation, biology of laboratory animals, laboratory animal resource management, grant and manuscript writing for biomedical researchers, laboratory and project management, biomedical ethics and seminars. Elective courses frequently taken by trainees include basic and advanced courses in immunology, molecular biology, physiology, reproductive biology and/or disease pathogenesis. Research typically deals with the application of an animal model in the investigation of human diseases or the study

continued on next page

of naturally occurring diseases of laboratory animals. Requirements for elective course work, residency and teaching experience are determined with the student's advisory committee. Trainees also participate in teaching and instructional programs offered to veterinary students and research personnel.

Written Scholarly Work
The MS degree requires the completion of a significant manuscript suitable for publication in a refereed journal, or an approved equivalent scholarly effort.

Residency
For trainees enrolled in the combined graduate/residency program, residency rotations are performed during the first year of training and research training occurs in years two and three.

Residency rotations include:
- clinical medicine and animal resource management in the Office of Animal Resources (OAR)
- diagnostic, comparative and research pathology in the Research Animal Diagnostic Laboratory (RADIL)

Moving to a PhD Program
Trainees desiring to change to a PhD program have the opportunity to do so in a variety of programs including the Pathobiology Area Program.

Courses

Graduate courses for Comparative (Veterinary) Medicine are listed as Laboratory Animal Medicine (LAB AN) in the myZou online system.

END OF PROGRAM DESCRIPTION

Biomedical Sciences Master of Science: Pathobiology emphasis

Note: For the PhD in Veterinary Pathobiology, refer to Pathobiology section of this catalog.

Contact Information

College of Veterinary Medicine
201 Connaway Hall
573-884-2444
URL: http://www.cvm.missouri.edu/vpbio/index.html

About the Program

The College of Veterinary Medicine offers a master of science degree in biomedical sciences with a specialization in veterinary pathobiology and/or laboratory animal medicine, which is administered through the Department of Veterinary Pathobiology. The degree requires 30 credit hours of work including courses, seminars, research, and problems courses. The program includes research in a particular field and defense of a thesis which embodies the results of this work. Certain areas of emphasis require submission of a formal master's thesis while others require preparation of a publishable manuscript.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Biomedical Sciences MS: Pathobiology Emphasis Faculty

Yuksel Agca
PhD, assistant professor of veterinary pathobiology

Kristina Aldridge
PhD, assistant professor of pathology and anatomical science

continued on next page

Gary K. Allen
DVM, PhD assistant professor of IAT Services Administration

Deborah Anderson
PhD, assistant professor of veterinary pathobiology

Douglas Anthony
MD, PhD, professor and chair of pathology and anatomical sciences

Brenda T. Beerntsen
PhD, associate professor of veterinary pathobiology

Linda Berent
DVM, PhD, clinical assistant professor of veterinary pathobiology

Alex Bermudez
DVM, MS, director of the Veterinary Medical Diagnostic Laboratory, associate professor of veterinary pathobiology

Cynthia Besch-Williford
DVM, PhD, associate professor of veterinary pathobiology

Charles R. Brown
PhD, associate professor of veterinary pathobiology

Elizabeth Bryda
PhD, associate professor of veterinary pathobiology

Michael Calcutt
PhD, associate professor of veterinary pathobiology

Charles Caldwell
PhD, professor of pathology & anatomical science - anatomical pathology

C. Andrew Carson
VMD, PhD, professor of veterinary pathobiology

Stan Casteel
DVM, PhD, associate professor of veterinary pathobiology

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Leah Cohn
DVM, PhD, associate professor of veterinary medicine & surgery

James Cook
DVM, PhD, associate professor of veterinary small animal medicine & orthopedic surgery

John Critser
PhD, Gilbreath McLorn Professor of Veterinary Pathobiology

Mark Daniels
PhD, assistant professor of molecular microbiology and immunology

John Dodam
PhD, professor of biomedical sciences

Tim Evans
DVM, PhD, assistant professor of veterinary pathobiology

William Fales
PhD, professor of veterinary pathobiology

Derek Fox
DVM, PhD, assistant professor of veterinary medicine & surgery

Craig Franklin
DVM, PhD, associate professor of veterinary pathobiology

ZeZong Gu
PhD, assistant professor of pathology & anatomical sciences

Daniel Hassett
PhD, assistant professor of veterinary pathobiology

Carolyn Henry
DVM, PhD, director of the Scott Program, associate professor of veterinary oncology

Tim Hoffman
PhD, associate professor of medicine - hematology & oncology

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Casey Holliday
PhD, assistant professor of pathology & anatomical sciences, anatomy

Gary S. Johnson
DVM, PhD, associate professor of veterinary pathobiology

Gayle C. Johnson
DVM, PhD, professor of veterinary pathobiology

Martin Katz
PhD, professor of opthalmology

DaeYoung Kim
DVM, PhD, clinical assistant professor

Keiichi Kuroki
DVM, PhD, assistant professor

Mike Lewis
PhD, associate professor of veterinary medicine & surgery

Robert Livingston
DVM, PhD, clinical associate professor of veterinary pathobiology

Christian Lorson
PhD, associate professor of veterinary pathobiology

Monique Lorson
PhD, assistant research professor of veterinary pathobiology

Dennis Lubahn
PhD, professor of biochemistry

John Middleton
DVM, PhD, associate professor of food animal medicine

W. Jeff Mitchell Jr.
DVM, PhD, associate professor of veterinary pathobiology

continued on next page

Cecil Moore
DVM, PhD, professor of ophthalmology

Matt Myles
PhD, assistant research professor of veterinary pathobiology

Kristina Narfstrom
DVM, PhD, Ruth M. Kraeuchi Endowed Professor of Veterinary Opthalmology

Dennis O'Brien
DVM, PhD, professor of veterinary medicine & surgery

Charlotte Phillips
PhD, associate professor of biochemistry

Matthew Ravosa
PhD, professor of pathology & anatomical science

Alpana Ray
PhD, associate research professor of veterinary pathobiology

Bimal Ray
PhD, professor of veterinary pathobiology

Chada Reddy
PhD, associate professor of veterinary biomedical sciences & pharmacology

Tom Reilly
PhD, assistant professor of veterinary pathobiology

Lela Riley
PhD, professor of veterinary pathobiology

R. Michael Roberts
PhD, professor animal science & biochemistry

Heidi Schatten
PhD, professor of veterinary pathobiology

continued on next page

Susan Schommer
PhD, assistant professor of veterinary pathobiology

Daniel Shaw
DVM, PhD, professor of veterinary pathobiology

Daniel Smith
PhD, associate professor of pathology & anatomical science - anatomical pathology

George P. Smith
PhD, professor of biological sciences

M. Sharon Stack
PhD, professor of pathology & anatomical science

Earl Steffen
PhD, assistant research professor of veterinary pathobiology

George Stewart
PhD, McKee Endowed Professor of Microbial Pathogenesis, chair of veterinary pathobiology

R. William Stich
PhD, associate professor of veterinary pathobiology

Catherine Vogelweid
DVM, PhD, clinical associate professor, director of graduate studies - veterinary pathobiology

Carol V. Ward
PhD, associate professor of pathology & anatomical science

Marlyn Whitney
DVM, PhD, associate clinical professor of veterinary pathobiology

Charles Wiedmeyer
DVM, PhD, assistant professor of veterinary pathobiology

Guoquan Zhang
PhD, assistant professor of veterinary pathobiology

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Admission Contact Information

Anne Chegwidden
201 Connaway Hall; Columbia, MO 65211
573-884-2444

Admission Criteria

- Fall deadline: n/a
- Minimum TOEFL score (when appropriate): 500/61 (Paper/Internet)
- Minimum GRE score: 1100 combined Verbal and Analytical
- Undergraduate GPA: 3.0
- Designated faculty mentor

Professional students with a DVM degree may be eligible to waive the GRE.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Veterinary Pathobiology Program:

- 3 letters of recommendation (can be submitted through the Graduate School's online application as well)
- GRE scores

Courses

See VETERINARY PATHOBIOLOGY (V PBIO) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Biomedical Sciences MS: Veterinary Medicine and Surgery emphasis

Contact Information

College of Veterinary Medicine
A-383 Veterinary Medical Teaching Hospital
573-882-1807
http://www.cvm.missouri.edu/VMS/index.htm

About the Program

The College of Veterinary Medicine, through the Department of Veterinary Medicine and Surgery, offers graduate work leading to the master of science degree in veterinary biomedical sciences with an emphasis in veterinary medicine and surgery. In addition, faculty within the department offer supervision for doctoral and postdoctoral study and research. Many but not all graduate students in this area of study combine their graduate degree training with clinical residency programs leading to board certification in some specialty field within veterinary medicine.

Types of Study

The program provides advanced training in anesthesiology, comparative cardiology, equine, food and companion animal medicine and surgery, neurology, oncology, ophthalmology, radiation biology, radiology, nutrition, and theriogenology among other areas.

Resources and Facilities

Graduate students have ready access to clinical patients, medical records and facilities of the Veterinary Medical Teaching Hospital to aid them in clinical research. The college has its own library.

More detailed information regarding the emphasis area of veterinary clinical sciences medicine and surgery can be found at the website http://www.cvm.missouri.edu/VMS/index.htm.

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Biomedical Sciences: Veterinary Medicine and Surgery emphasis Faculty

Sandra M. Axiak
assistant teaching professor, ACVIM (oncology), DVM, Michigan State University.

Bob Backus
associate professor, diplomate ACVN, DVM, PhD, University of California - Davis.

Keith R. Branson
clinical assistant professor, diplomate ACVA, diplomate ACVECC, DVM, Kansas State University, MS, University of Illinois.

Lisa Britt
assistant teaching professor, diplomate ACVR, DVM, North Carolina State University, MS, Washington State University.

C.B. Chastain
professor, associate dean for academic affairs, diplomate ACVIM, DVM, University of Missouri, MS, Iowa State University.

Joan R. Coates
associate professor, diplomate ACVIM (Neurology), BS, DVM, University of Missouri, MS, Auburn University.

Leah A. Cohn
professor, diplomate ACVIM (small animal internal medicine), DVM, University of Tennessee, PhD, North Carolina State University.

Cristi R. Cook
assistant teaching professor, diplomate ACVR, DVM, MS, University of Missouri.

James L. Cook
professor, director, comparative orthopedics laboratory, diplomate ACVS, DVM, PhD, University of Missouri.

continued on next page

Ross P. Cowart
associate professor, diplomate ABVP-FA, DVM, University of Georgia, MS, University of Illinois.

Craig A. Datz
assistant teaching professor, diplomate ABVP-Canine and Feline, DVM, Virginia-Maryland Regional College of Veterinary Medicine, MS, University of Missouri.

Amy E. DeClue
assistant professor, diplomate ACVIM (SAIM), DVM, University of Illinois, MS, University of Missouri.

John R. Dodam
associate professor, diplomate ACVA, DVM, The Ohio State University, MS, PhD, North Carolina State University.

Stephanie Essman
assistant teaching professor, diplomate ACVR, DVM Oklahoma State, MS University of Missouri.

Deborah Fine
assistant professor, DVM, Oregon State University, diplomate ACVIM (cardiology), MS, University of Minnesota.

Derek B. Fox
associate professor, DVM, Michigan State University, PhD, University of Missouri.

V.K. Ganjam
professor, DVM, SV University-India, MS, Washington State University, PhD, Oklahoma State University.

Elizabeth Giuliano
associate professor, diplomate ACVO, DVM, University of Wisconsin-Madison, MS, University of Missouri.

Allen W. Hahn
professor emeritus, DVM, Univ. of Missouri, PhD, Drexel University, Diplomate ACVIM (Cardiology).

continued on next page

Carolyn J. Henry
professor, diplomate ACVIM (oncology) DVM, MS, Auburn University.

Philip J. Johnson
professor, diplomate ACVIM–LAIM, ECEIM, BVSc, University of Bristol, MS, University of Illinois.

Rebecca A. Johnson
associate professor, FAAN, PhD, University of Iowa.

Kevin Keegan
professor, diplomate ACVS, DVM, University of Missouri, MS, University of Illinois.

Marie Kerl
associate teaching professor, diplomate ACVIM (small animal internal medicine), ACVECC, DVM, Auburn University.

Joanne Kramer
assistant teaching professor, diplomate ACVS, DVM University of Minnesota.

Jimmy C. Lattimer
associate professor, diplomate ACVR, diplomate ACVRO, DVM, Washington State University, MS, Colorado State University.

Michael R. Lewis
associate professor, MS, California Institute of Technology, PhD, City of Hope Graduate School of Biological Sciences.

Tony Mann
professor, director of small animal emergency and critical care, diplomate ACVS, diplomate ACVECC, DVM, The Ohio State University, MS, Texas A&M University.

Tessa S. Markovich
assistant teaching professor, diplomate ABVP (dairy practice), BVSc, Massey University, MS, University of Illinois.

Richard Meadows
teaching professor, diplomate ABVP, DVM, Texas A&M.

continued on next page

Nat T. Messer IV
professor, diplomate ABVP, DVM, Colorado State University.

John R. Middleton
associate professor, diplomate ACVIM (large animal medicine), DVM, PhD, Washington State University.

Cecil P. Moore
professor, diplomate ACVO, DVM, University of Missouri, MS, University of Wisconsin.

Dusty Nagy
assistant teaching professor, diplomate ACVIM (large animal internal medicine), DVM, Cornell University, PhD, University of Missouri.

Jesse K Nagy
assistant teaching professor, diplomate ACVR, DVM, Ross University, MS, University of Illinois.

Dennis O'Brien
professor, diplomate ACVIM (neurology), DVM, MS, PhD, University of Illinois.

Jacqueline Pearce
assistant teaching professor, diplomate ACVO, DVM, University of Saskatchewan, MS, University of Missouri.

Patrick Pithua
assistant professor, BVetMed, Makerere University, MSc, University of London, PhD University of Minnesota.

Shannon Reed
assistant teaching professor, diplomate ACVS, DVM, University of Missouri, MS, Oregon State University.

Carol N. Reinero
associate professor, diplomate ACVIM (small animal internal medicine), DVM, University of California-Davis, PhD, University of California-Davis.

continued on next page

Loren Schultz
assistant teaching professor, diplomate ACVPM-Beef, DVM, Kansas State University, MS, Kansas State University.

Kim A. Selting
assistant teaching professor, diplomate ACVIM (oncology), DVM, MS, Colorado State University.

Carlos Souza
assistant teaching professor, diplomate ACVIM (oncology), DVM, Universidade Federal Rural do Rio de Janeiro, MS, Universidate Federal Fluminense.

James Tomlinson
professor, diplomate ACVS, DVM, University of Minnesota, MVSc, University of Saskatchewan.

Dawna Voelkl
assistant teaching professor, diplomate ACT, DVM, Cornell University, MS University of Minnesota.

Dietrich Volkmann
teaching professor, diplomate ACT, BVSc, MMedVet, University of Pretoria, David A. Wilson Professor, diplomate ACVS, DVM, MS, University of Illinois.

Fred Wininger
assistant professor, diplomate ACVIM-Neurology, DVM, University of Pennsylvania, MS, Washington State University.

Robert S. Youngquist
professor, diplomate ACT, DVM, Iowa State University.

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Admission Contact Information

Connie Sievert
900 East Campus Drive; Columbia, MO 65211
573-882-1807

Admission Criteria

- Fall deadline: n/a
- Completion of a bachelor's or professional degree
- Identification of a mentor with graduate faculty standing within the Department of Veterinary Medicine and Surgery
- Identification of funding (with advice of mentor) for the period of research and study
- Minimum TOEFL score (when appropriate): 520
- Minimum Test of Spoken English score (when appropriate): 220
- Minimum GRE score: none

The majority of MS students within our program are completing specialty residency training programs in some field of veterinary medicine simultaneously with the MS degree. Admission to these programs generally precedes admission to our graduate programs. The GRE requirement may be waived for exceptional students by the Veterinary Medicine and Surgery Departmental Research and Graduate Studies Committee. Applicants may be asked to strengthen any deficiencies in prerequisites to the chosen area of concentration through enrollment in a post- or non-degree graduate student program.

Required Application Materials

To the Graduate School

- All required Graduate School documents

To the Veterinary Clinical Sciences Emphasis Program

- GRE scores

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

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Degree Requirements

Advisers and the Advisory Committee

Formulating a plan of study is the joint responsibility of the student, the adviser and the student's advisory committee. An advisory committee of at least three faculty members should be chosen during the first semester of enrollment. The advisory committee offers guidance and is responsible for approving a definitive plan of study.

The advisory group should consist of the major adviser and appropriate faculty members from the department, and at least one other member from another department within the college or university. Members of this committee may be recommended later for appointment to the examining committee. Members of the final examination committee should be chosen in the same manner as the advisory committee.

Publications

A thesis reporting the results of original research is required of all candidates. A scientific paper based on the thesis research must be submitted to a refereed journal.

Courses

Click to visit MyZou for a list of courses.

END OF PROGRAM DESCRIPTION

Black Studies Graduate Minor

Contact Information

Black Studies Program
313 Gentry Hall
573-882-6229
http://blackstudies.missouri.edu/

About the Black Studies Program

The Black Studies Program is crucial to the University of Missouri, to integrate multicultural knowledge into course work and increase the participation of ethnic and racial minorities in higher education. The Central Mission of the Black Studies Program is to train scholars to teach and research the World Black Experience by making available information and the analytical tools with which to study African people whether in the U.S., Africa, or throughout the Diaspora.

Affiliates of the Black Studies

The Black Studies Program encourages the use of multicultural curriculum throughout many different departments. Faculty members in affiliates of the program design new ways to incorporate topics of Black Studies in their courses. Programs affiliating with the Black Studies include history, nursing, religious studies, women & gender studies, sociology, English, romance languages, sociology, art, human development and family studies, law, political science, accountancy, theater, and educational leadership and policy analysis.

Resources

The Walter Daniel Resource Center is supported by a foundation set up by the estate of the late Dr. Walter C. Daniel. Dr. Daniel came to MU in 1973 as the University's first Vice Chancellor. He was instrumental in helping reorganize the University's administration. However, his success as an administrator never overshadowed his love of teaching and working with students. The books, periodicals, reference materials and media resources in this center will supplement and complement resources on the African American experience available to the University community in 328 Gentry Hall. Also, the center will house

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Dr. Daniel's extensive private library of African American literature. The library holds a wide collection of primary and secondary sources including numerous periodicals and scholarly journals. The library also has a small microfilm library as well as a small video collection which can be viewed on site. At the present time the library is a read-only research facility.

Plan of Study

An individual program of specialization in Black Studies may be arranged within the framework of a conventional graduate degree in any one of several fields. The options within a regular degree program are employed to include maximum exposure to courses emphasizing the African-American background and experience. Courses outside the major department, but in related fields, are incorporated into the student's study plan. Students interested in pursuing a black studies specialty within their chosen fields should consult a departmental adviser, who is an affiliate of the Black Studies Program, to assist in course selection. Lacking such an adviser, students should contact the director of the Black Studies Program for assistance or send an email to the Black Studies Program at blackstudies@missouri.edu.

Courses

See Black Studies (BL STU) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Business (Management, Marketing, and Finance) and Accountancy

Trulaske College of Business' Graduate Degree Programs

About the Robert J. Trulaske, Sr. College of Business and its Graduate Degree Programs

Founded in 1914, the Robert J. Trulaske, Sr. College of Business enrolls about 350 graduate students as well as 4,000 undergraduates. The primary mission of the college is to prepare students to succeed in the world of business and to advance the body of knowledge about the world of business. The college has four academic units – Accountancy, Finance, Management, and Marketing – with 59 full-time faculty members. The Trulaske College offers PhD degrees in both accountancy and business administration, an MBA degree, a 150-hour program that confers both undergraduate and master's degrees in accountancy, and an undergraduate degree in business administration. Over time, the college's degree programs and faculty research productivity have earned national acclaim. The college takes great pride in its graduates. More than 31,000 alumni are contributing their expertise to the public and private sectors in every state in the U.S. and in a host of foreign countries. The Trulaske College's graduate-level degree programs, dual degrees, and certificates are described on the following pages.

Accountancy Graduate Programs

Contact Information

School of Accountancy
Robert J. Trulaske, Sr. College of Business
303 Cornell Hall
573-882-4463
http://business.missouri.edu/Prospective+Students/Accounting/default.aspx

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About Accountancy Graduate Programs
The School of Accountancy offers graduate work leading to the master of accountancy and doctor of philosophy degrees. Graduate programs in accountancy prepare students for advanced professional careers in public, private and governmental accounting, and for careers in teaching and research.

Alert to change and recognizing that accounting education at the graduate level should be ahead of current practice, the School's programs require course work stressing advanced knowledge in accounting theory and practice, quantitative methods, economics and business. Opportunities exist on and off campus for exchanging ideas with practicing accountants and for participating in the solution of their professional problems.

Among the school's special facilities are a comprehensive collection of accounting and investment services, computer databases, technical journals and microfilm copies of annual reports, government documents and doctoral dissertations.

Funding
Fellowships, scholarships and teaching and research assistantships are available to qualified graduate students.

Accountancy Faculty

Vairam Arunachalam
director; professor; CMA, CFE; PhD, University of Illinois. Behavioral research in accounting, forensic accounting, and information systems.

Jere R. Francis
director of doctoral studies; professor; CPA; PhD, University of New England (Australia). The economics of auditing, corporate governance, international accounting and auditing research.

Inder Khurana
professor; ACA; PhD, Arizona State University. Financial accounting and auditing, market effects of financial statement disclosures, regulatory asset valuation in public utilities, the information content of audit qualifications and auditor changes.

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Elaine G. Mauldin
associate professor; CPA; PhD, University of Nebraska at Lincoln. Impact of technology on organizational control mechanisms, employee stock ownership plans and the theoretical structure of information systems.

Raynolde Pereira
associate professor; PhD, University of Arizona. Understanding corporate finance and payout decisions, tax planning strategies in not-for-profit organizations, banks and property casualty insurers.

Kenneth W. Shaw
associate professor; CPA; PhD, University of Wisconsin. Financial accounting and disclosure quality, analysts' forecasts, corporate governance, market microstructure.

Patrick Wheeler
associate professor; CPA; PhD, Georgia State University. Human factors in the use of accounting information systems. Change management in ERP implementation.

David Farber
assistant professor; CPA; PhD, Cornell University. Auditing, financial reporting fraud, corporate governance, market anomalies, and the impact of lobbying on accounting standards.

Kyonghee Kim
assistant professor; CPA; PhD, University of Pittsburgh. Compensation contracts, firms' voluntary disclosure and financial analyst coverage.

William J. Moser
assistant professor; CPA; PhD, University of Arizona. Income taxation, particularly the effect of taxes on corporate payout choice.

May H. Zhang
assistant professor; PhD, University of Texas at Austin. Financial reporting and disclosures, executive compensation, international accounting.

continued on next page

Qiuhong Zhao
assistant professor; PhD, University of Colorado. Market intermediaries, financial and reporting quality and valuation implications, earnings management, voluntary disclosure, corporate governance, and executive compensation.

Billie Cunningham
associate teaching professor; PhD, North Texas State University. Accounting education and accounting regulation.

Kristen M. Hockman
assistant teaching professor; CPA; MAcc, University of Missouri. Governmental accounting, auditing, accounting information systems.

Penny Kleen
assistant teaching professor; CPA; PhD, University of Missouri. Financial accounting, accounting education.

C. Christopher Prestigiacomo
associate teaching professor; CMA; CFA; PhD, University of Missouri. Intermediate accounting for finance majors and issues in managerial accounting.

Master's Degree in Accountancy (M Acc)

Admission Contact Information

Phyllis Moore moorepa@missouri.edu
303 Cornell Hall; Columbia, MO 65211
573-882-4463

About the M Acc Program

The growing scope and diversity of functions being performed by professional accountants has created a strong demand for individuals who have both a broader base of general and business education as well as more indepth technical accounting education than can be obtained in a four-year baccalaureate program. MU's MAcc program is designed especially to provide the additional breadth and depth of knowledge and skills required for success in contemporary accounting practice.

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Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Admission Criteria to the M Acc
- Fall deadline: March 15
- Minimum TOEFL score: 600/100 (paper/internet)
- Minimum GMAT score: 630 (75th percentile or higher for total, 50th percentile or higher on verbal portion
- Minimum GPA: at least 3.5 for last 60 hours
- Bachelor's degree from an accredited college or university, with a major in accountancy or equivalent
- A prior record of outstanding academic performance
- Strong letters of recommendation

Meeting the minimum requirements does not guarantee admission. Admission is competitive and based on space availability.

Required Application Materials
To the Graduate School:
- All required Graduate School documents
- Statement of objectives, no more than 500 words (upload to the online Graduate Application)
- TOEFL score (if native language is not English)

To the M Acc Program:
- GMAT score
- 2 Recommendation letters, mailed

Prerequisites for the M Acc
The master of accountancy (M Acc) program encompasses the last 30 hours of MU's 150-hour accountancy program and presumes students have completed the undergraduate portion of the program, or the equivalent. Students whose undergraduate education is not equivalent to the first 120 hours of the 150-hour program may overcome important deficiencies by taking additional courses approved by the program director.

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To be considered for acceptance in the M Acc program candidates must have completed the first 120 hours of MU's 150-hour program or received a baccalaureate degree from an accredited college or university with a major in accountancy or the equivalent (students with bachelor's degrees in non-accounting areas may enter the M Acc program after completing an appropriate set of "prerequisite" courses).

In addition to the requirements listed above, other factors such as the student's statement of objectives and recommendation letters also may be considered to the extent that they provide indications of a student's ability to be successful in the M Acc program.

The M Acc Admission Process

Generally, admission decisions for the M Acc program are made in the late spring and summer for fall admissions only, **and this is on a highly competitive basis**.

Graduation Requirements for the M Acc

The basic 30-hour M Acc curriculum requires a minimum of 15 hours of accountancy courses and a minimum of 15 hours of courses reserved exclusively for graduate students. A maximum of 6 semester hours of graduate level course work may be transferred from another accredited master's program.

Through careful selection of electives, the M Acc program provides great flexibility to enable customized programs of study in specialty areas of particular interest to students. Two of the most popular areas of specialization are accounting information systems (where a "systems track" is available) and taxation (where a "tax track" is available in cooperation with MU's School of Law). Other specialties may be developed in the areas of financial accounting and auditing.

For More Information about the M Acc

For additional information regarding the master of accountancy degree, please visit our Web site or write to Phyllis Moore, director of the 150-hour and master of accountancy programs, School of Accountancy, Robert J. Trulaske, Sr. College of Business, 303 Cornell Hall, University of Missouri, Columbia, MO 65211.

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Doctoral Degree in Accountancy

Admission Contact Information

Karen Staggs (staggs@missouri.edu)
303 Cornell Hall; Columbia, MO 65211
573-882-4463

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Admission Criteria

- Fall deadline: February 1
- Minimum TOEFL score: 600 (paper)
- Minimum GMAT score: 650
- A prior record of outstanding academic performance
- Strong letters of recommendation

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Accountancy PhD Program:

- Departmental Application
- 3 Recommendation letters, mailed or accepted electronically through the Graduate School application
- Statement of Purpose, mailed
- Resume, mailed
- Official GMAT scores

Prerequisites for the Doctoral Degree in Accountancy

Prerequisites to undertaking doctoral course work include one, and preferably two, semesters of calculus; an introductory statistics course; intermediate-level microeconomic theory; and an undergraduate accounting major (or equivalent). Prior graduate work is not required for admission to the program, but most successful applicants do have a master's degree.

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Graduation Requirements for the Doctoral Degree in Accountancy

The University requires 72 total hours beyond a baccalaureate degree for a PhD. In order to meet this requirement, the School of Accountancy requires the following program of course work and dissertation research:

- 15 hours in doctoral-level accounting research courses
- 15 hours of course work in supporting theoretical fields (e.g. economics, finance, organizational theory and behavior)
- 18 hours of statistics and other research methods courses
- 8 hours in a weekly research seminar (meeting one hour per semester for four years)
- 12–16 hours of dissertation research.

Course work is designed to be completed in five semesters (two and one-half years). Written and oral comprehensive examinations are then taken after completion of course work, and the remainder of years three and four is devoted to the completion of the research dissertation. Specializations are available in areas of faculty research interests.

More Information about the Doctoral Degree in Accountancy

For information about the doctoral degree in accountancy, visit our Web site or write to Dr. Jere Francis, director of the doctoral program in accountancy, School of Accountancy, Robert J. Trulaske, Sr. College of Business, 303 Cornell Hall, University of Missouri, Columbia, MO 65211.

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Accounting Information Systems Graduate Certificate

Contact Information

School of Accountancy
Robert J. Trulaske, Sr. College of Business
303 Cornell Hall
573-882-4463

For More Information

Phyllis Moore (moorepa@missouri.edu).

Eligibility

Students must be enrolled in the M Acc graduate degree program in the School of Accountancy at MU to be eligible for the program.

Academic Requirements

Completion of the requirements for the Certificate in Accounting Information Systems indicates that a student has developed expertise in the theory, design, implementation, processing, assurance and use of accounting information systems for providing information needed for various business decisions. Students must complete 18 credit hours to receive this certificate.

More Information

For more information, contact Phyllis Moore; 303 Cornell Hall; University of Missouri; Columbia, MO 65211.

Required Courses:

- Accountancy 3328
- Accountancy 2258

Elective Courses:

- Accountancy 8358
- Accountancy 8414
- Accountancy 8438
- Accountancy 8448
- Management 8100
- Management 8420
- Approved Computer Science courses

continued on next page

Taxation Graduate Certificate

Contact Information
School of Accountancy
303 Cornell Hall
573-882-4463
For more information, contact Phyllis Moore (moorepa@missouri.edu).

About the Certificate
Depending on the course configuration in the program, completion of the Certificate in Taxation indicates that a student has developed expertise in tax planning and preparation in regard to international, federal, state, or estate issues for corporations, partnerships, or individuals.

Eligibility
Students must be enrolled in the M Acc graduate degree program in the School of Accountancy at MU to be eligible for the certificate.

Plan of Study
Students are required to complete 18 credit hours to receive the certificate.

Required Courses:
- Accountancy 7353
- Accountancy 8423
- Accountancy 8453
- Accountancy 8373

Elective Courses:
- Law 5375
- Law 5465
- Law 5815
- Law 5675
- Law 5555
- Law 5915
- Law 5916

Courses

See Accountancy (ACCTCY) in the MyZou online system.

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Business Administration Graduate Programs

Contact Information

Robert J. Trulaske, Sr. College of Business
213 Cornell Hall
573-882-2750
http://business.missouri.edu/1566/default.aspx

Degrees Offered

- Master of Business Administration (MBA)
- Doctorate (PhD) in Business Administration
- Cooperative Dual Degrees:
  - MBA and Bachelor of Science in Industrial Engineering (BSIE)
  - MBA and Master of Health Administration (MHA)
  - MBA and Master of Science in Industrial Engineering (MSIE)
  - MBA and Juris Doctor (JD)

The master of business administration and the doctor of philosophy in business administration are offered by the School of Business and the Trulaske College of Business, respectively, through the Departments of Finance, Management and Marketing.

Facilities and Resources

Cornell Hall, a state-of-the-art building, houses the Robert J. Trulaske, Sr. College of Business. It contains labs with over 230 computers with a variety of up-to-date software. The College subscribes to the following online services, databases and software packages: Wharton Research Data Services, Compustat, CRSP, I/B/E/S, First Call, NYSE TAQ, IRRC, ISSM, Mutual Fund Links, Thomson Reuters, Factiva, SDC Platinum, Eventus, Audit Analytics, Corporate Library, AICPA, ARN, ERN, FARS, FEN, Government Account Research System, LIPPER, Stock Trak, and Qualtrics (an online survey system).

Business Administration Faculty

Joan Gabel

dean, Robert J. Trulaske Sr., Dean of the Trulaske College of Business, JD, University of Georgia School of Law.

Allen C. Bluedorn

associate dean for graduate studies and research, Emma S. Hibbs

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Distinguished Professor, professor of management, PhD, University of Iowa.

Peter H. Bloch
Pinkney C. Walker Teaching Excellence Fellow, professor of marketing, PhD, University of Texas.

Todd H. Chiles
associate professor of management, PhD, University of Oregon.

Thomas W. Dougherty
Emma S. Hibbs/Harry Gunnison Brown Chair of Business and Economics, professor of management, PhD, University of Houston.

Stephen P. Ferris
James Harvey Rogers Chair of Money, Credit and Banking, director of Financial Research Institute, professor of finance, PhD, University of Pittsburgh.

Charles R. Franz
associate professor of management, PhD, University of Nebraska.

Lori S. Franz
professor of management, PhD, University of Nebraska.

Dan W. French
professor of finance, chair, PhD, Louisiana Tech University.

Srinath Gopalakrishna
David and July O'Neal MBA Professor, professor of marketing, PhD, Purdue University.

Daniel W. Greening
associate professor of management, PhD, The Pennsylvania State University.

Christopher J. Groening
assistant professor of marketing, PhD, University of Pittsburgh.

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Qing (Grace) Hao
assistant professor of finance, PhD, University of Florida.

John S. Howe
Missouri Bankers Chair Professor of Finance, Chartered Financial Analyst, PhD, Purdue University.

Arthur G. Jago
Frances Ridge Gay MBA Professor, professor of management, PhD, Yale University.

Lin Jiang
assistant professor of management, PhD, Georgia Institute of Technology.

Richard A. Johnson
Emma S. Hibbs/Fredrick C. Middlebush Chair in Entrepreneurship, professor of Management, PhD, Texas A&M University.

Murali K. Mantrala
Sam M. Walton Distinguished Professor of Marketing, PhD, Northwestern University.

Detelina Marinova
assistant professor of marketing, PhD, University of Cincinnati.

Douglas D. Moesel
associate professor of management, PhD, Texas A&M University.

Joel C. Poor
associate teaching professor of marketing, PhD, University of California, Irvine.

S. (Ratti) Ratneshwar
Bailey K. Howard World Book Chair of Marketing, professor of marketing, chair, PhD, Vanderbilt University.

Marsha L. Richins
Myron Watkins Distinguished Professor, professor of marketing, PhD, University of Texas.

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Christopher Robert
associate professor of management, PhD, University of Illinois.

Lisa K. Scheer
Emma S. Hibbs Distinguished Professor, associate professor of marketing, PhD, Northwestern University.

Karen A. Schnatterly
associate professor of management, PhD, University of Michigan.

Antonie Stam
Leggett & Platt Distinguished Professor of Information Systems, professor of management, PhD, University of Kansas.

Christopher S. Tuggle
assistant professor of management, PhD, Texas A&M University.

Daniel B. Turban
Stephen Furbacher Professor in Organizational Change, professor of management, chair, PhD, University of Houston.

Bruce J. Walker
Lansford Professor of Leadership, PhD, University of Colorado.

James A. Wall Jr.
Curators Distinguished Teaching Professor, professor of management, PhD, University of North Carolina.

David A. West
professor of finance and CTMT Scholar, PhD, University of Arkansas.

Xuemin Yan
associate professor of finance, PhD, University of Iowa.

Shaoming Zou
professor of marketing, PhD, Michigan State University.

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Master of Business Administration

Contact Information

Office of Admissions
213 Cornell Hall; Columbia, MO 65211
573-882-2750
mba@missouri.edu
http://mba.missouri.edu

About the Crosby MBA

Crosby MBA candidates come from all backgrounds, including science, engineering, liberal arts, journalism, business and health-related fields. There are no prerequisite courses. Our admission standards are high and the curriculum is rigorous. The Crosby MBA program is accredited by AACSB International and is nationally recognized and highly ranked by U.S. News America's Best Graduate Schools, Forbes, Princeton Review, and The Wall Street Journal.

Career Preparation

At the Crosby MBA program, highly capable graduate students gain real-world experience that prepares them for a wide variety of career paths. The program teaches skills necessary to compete in the global business environment, encourages personal professional development, and provides for an area of concentration in management, marketing, finance, marketing analytics, or another field related to a student's individual interests. Students obtain employment in fields such as financial analysis, investments, banking, human resources, project management, strategy, operations, and logistics, marketing, consulting, and non-profit entities.

Financial Aid from the Program

Financial assistance in the form both of scholarships and research/ teaching assistantships is available from the Crosby MBA program and is awarded on a competitive basis. Graduate assistantships are usually quarter-time appointments involving 10 hours of work a week at over $4,900 annually. All or some educational fees may be waived for holders of scholarships and assistantships. Some students serve as instructors for undergraduate finance classes and are paid over $7400 annually for those positions.

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Admission Requirements for the Crosby MBA

Factors considered in the admissions decision include undergraduate grade point average (GPA), as indicated on the graduation transcript, with consideration given to other calculations; performance on the Graduate Management Admissions Test (GMAT); work experience, including significant part-time employment and internships; demonstrated leadership; and personal essays. A baccalaureate degree in any discipline from an accredited school is required.

International Applicants to the Crosby MBA

Each year approximately one-quarter of the Crosby MBA students enter the program from a variety of foreign countries. Applications are similar to those for domestic students, but an international student whose native language is not English is required to present an acceptable score on one of the following:

- TOEFL – Minimum score of 550/79 (paper/internet); OR
- IELTS – Minimum score of 5.5.

Admitted international students are often encouraged to participate in the university's Intensive English Program to strengthen their preparation for the MBA coursework.

Deadlines for Application to the Crosby MBA

Students may begin the program any semester. Deadlines are as follow:

- Fall: January 1 (priority for scholarships); February 15; April 1; rolling thereafter
- Spring: October 1 (priority for scholarships); December 1; rolling thereafter
- Summer: January 1 (priority for scholarships); February 15; April 1; rolling thereafter

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Crosby MBA program:

- Department Application
- Résumé
- GMAT score (and TOEFL or IELTS for international students)
- Official transcript (this is in addition to the transcript required by the Graduate School)

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MBA Plan of Study

Five study areas in Quantitative Analysis, Finance, Management, Marketing and Professional Development & Experiential Learning provide a comprehensive business education for Crosby MBA students. Each area includes introductory classes for students new to the field, as well as advanced classes which ensure in-depth knowledge and skills. New courses in quantitative analysis have been added to assure that graduates enter the 21st century business world with tools that will enable them to be successful. The format also now includes 1.5 credit hour, 8-week modules, to allow for more focused attention to a particular topic, as well as to provide a wider array of choices.
The remainder of the course work is composed of fifteen hours of elective credit of which nine may be in a concentration area. The structure of the MU Crosby MBA allows students to concentrate in a specific area of business, develop a broad managerial focus, or complement business training with course work from other areas on campus.

Up to 24 credits of introductory courses may be waived if students have prior equivalent course work with a minimum grade of "B" and as determined by the advisor based upon transcripts and course descriptions. Up to six credit hours of advanced work may be transferred from a regionally accredited institution in the U.S. or an overseas institution that is recognized by its country's Ministry of Education as a graduate degree granting institution, in accordance with the University of Missouri Graduate School policies. Business graduate level courses transferred in must be from a university that is accredited at the master's level by AACSB International.

Accelerated Crosby MBA Program

Although no business background is required for entry to the program, students who have such will accelerate based on the waivers described above and may be able to graduate in 12-16 months. Normal degree completion is 21 months if full-time.

Graduation Requirements for the Crosby MBA

Total graduate course work necessary to qualify for the Crosby MBA degree may vary from 35 to 59 semester hours. Individual program length depends on the number of introductory courses a student waives as determined by the academic adviser. For graduation, MBA students must have a cumulative grade point average of 3.0 or better in the

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hours completed in the designated MBA plan of study and a minimum 3.0 cumulative MU graduate grade point average.

Good Standing

To remain in good standing, a graduate student must maintain a cumulative grade point average of 3.0 or better. At the end of any semester, a graduate student whose cumulative grade point average is less than 3.0 is placed on academic probation. A student is subject to dismissal if the cumulative grade point average remains less than 3.0 or if, at any point, the student's semester or cumulative grade point average falls to less than 2.0.

Doctorate in Business Administration

Admission Contact Information

Jan Curry (grad@missouri.edu)
213 Cornell Hall; Columbia, MO 65211
573-882-2750
http://business.missouri.edu/Prospective+Students/PhD/default.aspx

About the Doctorate in Business Administration

The PhD program is designed to prepare graduates for careers as effective university researchers and teachers or for senior research positions in business or government. A primary objective of the program is to train PhD candidates to become proficient researchers. Therefore, course work involves research activities such as literature review and critique, theoretical modeling, research design, computer-assisted empirical analysis and preparation of proposals and research papers. Another objective is to train students to become high-quality teachers. PhD candidates are provided the opportunity to teach undergraduate courses in their specialty area. In addition, students are expected to participate in national and regional academic conferences and are encouraged to work with faculty in developing individual research and teaching skills.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details. Financial assistance (research and teaching

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assistantships) is generally awarded at the time of acceptance to the program. These assistantships are usually half-time appointments involving approximately 20 hours of work each week, with work split between teaching and research assignments.

Assistantships are supplemented by scholarships and summer teaching or research assignments to provide minimum financial support of at least $20,555 annually. Additional scholarship and professional development funds are available. Educational fees are waived for holders of assistantships as well as the supplemental business course fee. The College provides each doctoral student with $2,000 in development funds, and departments offer support for research projects and travel associated with research presentations at major academic conferences. A Medical insurance subsidy and discounts on University Bookstore purchases are provided to holders of assistantships.

Admission Criteria

- Fall deadline: February 1
- Minimum TOEFL score: 550/173 (paper/computer)
- Minimum GMAT score: Superior test scores
- Outstanding performance in previous academic work
- Maturity and potential required for making scholarly contributions to their field of interest

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Doctorate in Business Administration Program:

- Departmental Application
- 3 letters of recommendation
- GMAT scores
- Statement by the applicant indicating the intended major area of study, career objectives and any other information deemed pertinent for consideration by the admissions committee

Plan of Study and the Program Committee

During the first semester of course work, the PhD Coordinator, a member of the doctoral faculty from the major area of study (finance, management or marketing), serves as the student's faculty adviser.

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By the end of the first year of course work, a student should make formal application for the doctoral degree and, after consultation with faculty, request appointment of a Doctoral Program Committee. This committee consists of at least three members from the student's major area of study and at least one member from each supporting area of study.

The Doctoral Program Committee conducts the qualifying examination and works with the student to design a plan of study that must include the following:

- 15 hours of business core course work to acquaint the student with the functional areas of business. These courses can be waived if the student has satisfactorily completed equivalent course work.
- An in-depth major concentration in the area of finance, management (organizational sciences) or marketing (minimum of 15 hours of 8000/9000-level courses).
- 2 support areas of at least 9 hours each, one of which must be taken outside the School of Business, or one support area of at least 12 hours. These supporting areas offer the student considerable latitude in identifying a course of study that can be tailored to the individual's interests and goals. If two support areas are selected, the student must also satisfy a 12-hour analytical tool requirement; if one support area is selected, the analytical tool requirement is 18 hours.
- Collateral requirements emphasizing analytical tools (proficiency in a foreign language does not fulfill the collateral requirements). This is a research methods and analyses sequence of at least 12 hours (at least 18 if only one support area), including appropriate courses in economics, mathematics, psychology, sociology, statistics or other areas deemed appropriate by the program committee.
- An ongoing seminar experience (each semester until successful completion of comprehensive examinations) that acquaints the student with current literature and research in his/her major area of interest. This seminar is in addition to other seminars offered departmentally (4 hours minimum).
- Dissertation (minimum 12 hours of 9090 credit).

Counting Credits

The plan of study requirements listed above are independent of one another; courses taken to satisfy one requirement may not be used to satisfy any other requirement. Previous graduate work taken before

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admission to the PhD program may be used to satisfy these requirements if it is deemed appropriate by the student's program committee.

Residency Requirement
In compliance with University regulations, the doctor of philosophy degree requires the completion of 72 semester hours of graduate work beyond the baccalaureate degree. Within the credit-hour requirement is the residency requirement. To satisfy the residency requirement, a student must complete at least 2 9-hour semesters or 3 6-hour semesters in an 18-month period at MU. All courses taken to satisfy the residency requirement must be MU courses approved for graduate credit and approved by the student's doctoral program committee. Correspondence and off-campus courses may not be counted toward the residency requirement. This program is designed for full-time students and typically requires a 4-year on-campus commitment.

Comprehensive Examination
Typically, after completion of the course work specified on the plan of study, the student's doctoral program committee determines the student's readiness to undertake the comprehensive examination. The student must be enrolled at MU the semester s/he takes this examination.

The comprehensive examination consists of written and oral sections. Both sections must be completed within one month of each other, and at least seven months before a final dissertation defense. Successful completion of the comprehensive examination requires that the student's doctoral program committee vote to pass the student on the entire examination, both written and oral sections, with no more than one dissenting or abstaining vote. The student who fails this exam may not take a second comprehensive examination for at least 12 weeks. Failure to pass two successive comprehensive examinations automatically prevents candidacy.

Annual Review
The progress of all PhD students is reviewed annually. This review considers student progress in course work and in teaching and research development. In addition, student performance on assistantship assignments is considered, as is student professional conduct and motivation for PhD study. The review is coordinated by the chair of

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the student's doctoral program committee. It includes a student self-evaluation, input from faculty familiar with the student, discussion with the student and a written evaluation letter.

Courses

See Business Administration (BUS AD) graduate courses in the MyZou online system.

Finance Concentration (PhD in Business)

Contact Information

Robert J. Trulaske, Sr. College of Business
403 Cornell Hall
573-882-6272

About the Finance Concentration for the PhD in Business

The departments of Finance, Management and Marketing in the Robert J. Trulaske, Sr. College of Business jointly offer the PhD in Business Administration with a Finance concentration. Program information, faculty and requirements are given for both the MBA and PhD programs under Business Administration.

Courses

See Finance (FINANC) graduate courses in the MyZou online system.

Management Concentration (PhD in Business)

Contact Information

Robert J. Trulaske, Sr. College of Business
403 Cornell Hall
573-882-6556

About the Management Concentration for the PhD in Business

The departments of Finance, Management and Marketing in the Robert J. Trulaske, Sr. College of Business jointly offer the PhD in Business Administration with a Management concentration. Program information, faculty and requirements are given for both the MBA and

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PhD programs under Business Administration.

Courses
See Management (MANGMT) in the MyZou online system.

Marketing Concentration (PhD in Business)

Contact Information
Robert J. Trulaske, Sr. College of Business
403 Cornell Hall
573-882-3282

About the Marketing Concentration for the PhD in Business
The departments of Finance, Management and Marketing in the Robert J. Trulaske, Sr. College of Business jointly offer the PhD in Business Administration with a Marketing concentration. Program information, faculty and requirements are given for both the MBA and PhD programs under Business Administration.

Courses
See Marketing (MRKTNG) graduate courses in the MyZou online system.

END OF PROGRAM DESCRIPTION

Canadian Studies Center

The Canadian Studies Center (CSC) is an interdisciplinary group within the College of Arts and Science drawing faculty members from across the university. The group contains representation from the Departments of Political Science, Anthropology, History, Romance Languages and Literature, English, and Geography and the Schools of Public Affairs and Agriculture.

The CSC capitalizes on the breadth and diversity of these faculty members and offers a yearlong speakers series covering a wide-range of topics and theoretical disciplines. Furthermore, the CSC emphasizes the delivery of Canadian-content curriculum to students and, at the time of writing this, is working on developing a minor in Canadian Studies at the graduate level. For more information on the CSC please contact Dr. James Endersby, director, Canadian Studies Center, Department of Political Science.

Center for the Digital Globe: Graduate Certificate

Contact Information

Center for the Digital Globe
310 Reynolds Journalism Institute
573-882-4991
http://cdig.missouri.edu/index.html

About the Graduate Certificate

Established by the College of Business, School of Journalism, School of Law and the Department of Textile and Apparel Management in the College of Human Environmental Sciences.

The Center for the Digital Globe offers two certificate options:

- A Stand-Alone Certificate, for non-degree graduate students and students completing professional degrees
- Graduate-Degree-Dependent Certificate, for students completing a graduate degree

CDiG Stand-Alone Certificate

(for non-degree graduate students and students completing professional degrees)

The Center for the Digital Globe, established by the College of Business, School of Journalism, School of Law and Department of Textile and Apparel Management in the College of Human Environmental Sciences, offers an interdepartmental certificate to non-degree graduate students and professional students of the University of Missouri. The prerequisite for the stand-alone certificate is a baccalaureate degree. The certificate program supplements the students' studies within the various colleges and schools that make up the University. This is not a degree-granting program. Instead, the certificate attests to the students' successful completion of a required course of study with emphasis on the managerial, theoretical and policy-related issues associated with digital media, electronic commerce and globalization.

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Students receiving the stand-alone certificate will have demonstrated competencies in:

Technology
Students need not have achieved mastery of specific engineering, programming or application skills. Instead, the students must demonstrate a working understanding of how digital technologies function.

Global Communication
One of the primary characteristics of digital technologies, and particularly the Internet, are their function as worldwide communications media. Whether from the perspective of journalism, business or the law, the impact of these new communications channels has been substantial. Students should achieve an understanding of how new media are different from print or broadcast media and the consequences of those differences.

Business
Students should be well grounded in the principles, opportunities and ethical uses of electronic commerce and its impact on journalism, law and commercial practices.

Culture and Society
Digital media raise recurrent questions which call for political and social solutions. Students should be able to understand the broader issues raised by technological change and be prepared to take positions of leadership as such issues present themselves. Examples of such issues are questions of globalization, political boundaries, access, ownership and uses of information, marketing, etc. To achieve the goals of the certificate and assure its value to students, the University and prospective employers or donors, the certificate program enjoys certain characteristics. Perhaps most fundamental is the interdisciplinary nature of the program. While each department has the capability of offering a course emphasis, track or intra-departmental certificates to students in the area of technology and commerce, one of the fundamental concepts underlying the Center is the value and necessity of approaching these issues from the perspective of various disciplines. With these principles in mind, the program has been designed to assure that the interdisciplinary character of the course of work will be emphasized.

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The required course work compels students to come together for an interdisciplinary introduction to their studies and permits them to work separately and within their respective disciplines for further study. Students come together for a concluding experience that involves working collectively through a case study.

Academic Requirements for Stand-Alone Certificate

Eligibility:

Prerequisite for the stand-alone certificate is a baccalaureate degree. Professional students who are pursuing the stand-alone certificate must dually enroll in the Graduate School, be admitted to the CDiG Graduate Certificate Program and receive graduate credit for their 12 semester hours of stand-alone certificate courses. Others seeking this certificate who are not professional students and have not been admitted to Graduate School must also apply and be admitted to the CDiG Graduate Certificate Program. Apply online at the following web site: https://app.applyyourself.com/?id=umc-grad

SPECIAL NOTE FOR LAW STUDENTS: No more than six non-Law credits may count toward the JD degree.

Credits: At least 12 eligible credit hours, consisting of an introductory, interdisciplinary course (Management 8100), 6 credit hours in two or more eligible graduate courses, and a concluding seminar/research project course (Journalism 8052). The course of work for certificate students is more specifically described as:

1. Management 8100: Exploring the Digital Globe, 3 credits (offered Fall Semesters).

This inter-departmental course introduces students to the impacts of technological change and globalization from the perspective of business, law and journalism. Students are introduced to electronic commerce, digitization and globalization to prepare them to respond to the challenges of the digital globe. Students do not acquire specific technological skills; they acquire a working understanding of how digital technologies function. The course is taught by faculty from the journalism, business and law schools, and from the Department of Textile and Apparel Management of the College of Human Environmental Sciences. Visiting speakers, including speakers presenting programs for the Center for the Digital Globe, meet with the class to share their research and experience.

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2. 6 credits of graduate course work
The courses taken to satisfy this requirement are those that have been approved by the Center's faculty in consultation with the academic programs that offer the courses. The approved courses are graduate level courses that address one or more of the competencies specified above. View the list of courses at the CDiG's website.

3. Journalism 8052: Case Studies in the Digital Globe, 3 credits (offered Fall and Winter Semesters).
The course is designed to further develop the levels of understanding and skills obtained in previous course work. In this class, students will achieve a better understanding of how new media are different from print or broadcast media and the consequences of those differences. Students are introduced to the principles, opportunities and ethical use of electronic commerce. Students critically analyze issues raised by technological change, including globalization, political boundaries, access, ownership and uses of information, marketing, etc.

As with the introductory class, this course is taught by faculty from a variety of departments. Visiting speakers, including speakers presenting programs for the Center for the Digital Globe, meet with the class to share their research and experience.

4. Grades Students must maintain a minimum grade of 3.0 or equivalent in each course to receive credit toward completion of the certificate.

Stand-Alone Certificate Requirements
To be eligible for the stand-alone certificate in the Center for the Digital Globe, students are required to take four courses for graduate credit: two courses offered through CDiG and two electives. The required courses are Management 8100 (Exploring the Digital Globe) and Journalism 8052 (Case Studies in the Digital Globe). The two electives should be determined in consultation with the student's CDiG affiliated advisor. To receive the certificate, students must print and fill out the "Application for a Graduate Certificate" form located at the following Graduate School web site: http://gradschool.missouri.edu/programs/graduate-certificates/plan-study.php

The form asks for a list of courses taken by the student that fills the certificate requirements. The form must be signed by the student,

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the CDiG executive director and the graduate dean. For students completing a professional degree, a copy of the student's approved degree program must be attached to the certificate application form when submitting it for the CDIG executive director's approval. The form then must be submitted to the Graduate School, 210 Jesse Hall.

CDiG Graduate Degree-Dependent Certificate (for students completing a graduate degree)

The Center for the Digital Globe, established by the College of Business, School of Journalism, School of Law and Department of Textile and Apparel Management in the College of Human Environmental Sciences, offers an interdepartmental certificate to graduate students of the University of Missouri. The certificate program supplements the students' graduate studies within the various colleges and schools that make up the University. This is not a degree-granting program. Instead, the certificate attests to the students' successful completion of a required course of study with emphasis on the managerial, theoretical and policy-related issues associated with digital media, electronic commerce and globalization.

Students receiving the graduate degree dependent certificate will have demonstrated competencies in:

Technology: Students need not have achieved mastery of specific engineering, programming or application skills. Instead, the students must demonstrate a working understanding of how digital technologies function.

Global Communication: One of the primary characteristics of digital technologies, and particularly the Internet, are their function as worldwide communications media. Whether from the perspective of journalism, business or the law, the impact of these new communications channels has been substantial. Students should achieve an understanding of how new media are different from print or broadcast media and the consequences of those differences.

Business: Students should be well grounded in the principles, opportunities and ethical uses of electronic commerce and its impact on journalism, law and commercial practices.

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Culture and Society: Digital media raise recurrent questions which call for political and social solutions. Students should be able to understand the broader issues raised by technological change and be prepared to take positions of leadership as such issues present themselves. Examples of such issues are questions of globalization, political boundaries, access, ownership and uses of information, marketing, etc.

To achieve the goals of the certificate and assure its value to students, the University and prospective employers or donors, the certificate program enjoys certain characteristics. Perhaps most fundamental is the interdisciplinary nature of the program. While each department has the capability of offering a course emphasis, track or intra-departmental certificates to students in the area of technology and commerce, one of the fundamental concepts underlying the Center is the value and necessity of approaching these issues from the perspective of various disciplines. With these principles in mind, the program has been designed to assure that the interdisciplinary character of the course of work will be emphasized. The required course work compels students to come together for an interdisciplinary introduction to their studies and permits them to work separately and within their respective disciplines for further study. Students come together for a concluding experience that involves working collectively through a case study.

Academic Requirements for Graduate Degree Dependent Certificate

Graduate degree seeking students who want to pursue a Center for the Digital Globe Certificate must complete a Change of Program Form and be formally admitted to the certificate program. Print the Change of Program Form located at the following Graduate School web site: http://gradschool.missouri.edu/admission/change_degree.pdf
See your graduate faculty advisor to process the form.

SPECIAL NOTE: No more than six of the twelve credits necessary for the CDiG Graduate Degree Dependent Certificate may count toward the graduate degree.

Eligibility: Students who have completed their baccalaureate studies and are enrolled in a master's, doctoral or professional program and working toward a graduate degree at the University of Missouri.

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Credits: At least 12 eligible credit hours, consisting of an introductory, interdisciplinary course (Management 8100), 6 credit hours in two or more eligible graduate courses, and a concluding seminar/research project course (Journalism 8052). The course of work for certificate students is more specifically described as:

1. Management 8100: Exploring the Digital Globe, 3 credits (offered Fall Semesters)
This interdepartmental course introduces students to the impacts of technological change and globalization from the perspective of business, law and journalism. Students are introduced to electronic commerce, digitization and globalization to prepare them to respond to the challenges of the digital globe. Students do not acquire specific technological skills; they acquire a working understanding of how digital technologies function. The course is taught by faculty from the journalism, business and law schools, and from the Department of Textile and Apparel Management of the College of Human Environmental Sciences. Visiting speakers, including speakers presenting programs for the Center for the Digital Globe, meet with the class to share their research and experience.

2. 6 credits of graduate course work
The courses taken to satisfy this requirement are those that have been approved by the Center's faculty in consultation with the academic programs that offer the courses. The approved courses are graduate level courses that address one or more of the competencies specified above. View the list of courses at the CDiG's website.

3. Journalism 8052: Case Studies in the Digital Globe, 3 credits (offered Fall and Winter Semesters)
The course is designed to further develop the levels of understanding and skills obtained in previous course work. In this class, students will achieve a better understanding of how new media are different from print or broadcast media and the consequences of those differences. Students are introduced to the principles, opportunities and ethical use of electronic commerce. Students critically analyze issues raised by technological change, including globalization, political boundaries, access, ownership and uses of information, marketing, etc. As with the introductory class, this course is taught by faculty from a variety of departments. Visiting speakers, including speakers presenting programs for the Center for the Digital Globe, meet with the class to share their research and experience.

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4. Grades: Students must maintain a minimum grade of 3.0 or equivalent in each course to receive credit toward completion of the certificate.

Graduate Degree Dependent Certificate Requirements
To be eligible for the graduate degree dependent certificate in the Center for the Digital Globe, students are required to take four courses: two courses offered through CDiG and two electives.

The required courses are Management 8100 (Exploring the Digital Globe) and Journalism 8052 (Case Studies in the Digital Globe). The two electives should be determined in consultation with the student's graduate advisor.

SPECIAL NOTE: No more than six of the twelve credits necessary for the CDiG Graduate Degree Dependent Certificate may count toward the graduate degree. To receive the certificate, students must print and fill out the Application for a Graduate Certificate form located at the following Graduate School web site: http://gradschool.missouri.edu/programs/graduate-certificates/plan-study.php

The form asks for a list of courses taken by the student that fills the certificate requirements. The form must be signed by the student, the CDiG executive director and graduate dean. A copy of the student's approved graduate degree program must be attached to the certificate application form when submitting it for the CDiG executive director's approval. The form then must be submitted to the Graduate School, 210 Jesse Hall.

For More Information

For more information, contact The Center for the Digital Globe; 310 Reynolds Journalism Institute; University of Missouri, Columbia, MO 65211, or at cdig@missouri.edu.

END OF PROGRAM DESCRIPTION

Chemical Engineering

Contact Information

College of Engineering
W2030 Lafferre Hall
573-882-3563
http://che.missouri.edu

About Chemical Engineering

Established in 1906, MU Chemical Engineering has a long standing commitment to provide quality undergraduate and graduate education. Our department serves the discipline well by providing state of the art research facilities in many cutting edge fields including plasma processing, polymers, reaction engineering, environmental issues, biochemical engineering, and many others.

Career Opportunities

The Chemical Engineering program develops versatile professionals who can excel in a variety of career environments. Our curriculum is focused on the basic sciences, engineering topics, and problem solving and design. Our flexible program allows our graduates to move into traditional as well as non-traditional chemical engineering careers. Additionally, we build research and development skills by integrating research, scientific inquiry, and critical thinking into our curriculum.

Some of our graduates work in the traditional areas of chemical engineering such as the petroleum and chemical industries. Many graduates practice their profession in the areas of microelectronics, pharmaceuticals, materials, polymers, environmental protection, consumer products, or as managers in business, government careers, and engineering consultants. Still others enter into careers in academia.

Degrees: MS and PhD in Chemical Engineering

The Department of Chemical Engineering offers graduate work leading to the degrees of master of science and doctor of philosophy. Information on engineering licensure is detailed under Professional Engineering Registration.

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Faculty Research
Currently active research areas include polymer processing, plasma technology, supercritical fluid technology, alternative fuels, environmental catalysis, ceramic materials, process control and dynamics, biotechnology, clean process technology, bioremediation, blends and composites, catalysis and C1-chemistry, mathematical modeling and simulation, and biochemical engineering.

Facilities and Resources
There are excellent facilities for research students, including an equation of state and transport properties laboratory, a heterogeneous catalysis and reaction kinetics laboratory, a heat and mass transport laboratory, an air pollution monitoring and control laboratory, a biochemical engineering laboratory, a computational laboratory, a transport properties phenomena laboratory, and a Surface Science and Plasma Technology Center. Excellent library facilities provide the latest domestic and international journals specific to chemical engineering and physical sciences research.

Internal Funding
Research and teaching assistantships are available to qualified students for the entire year. The yearly stipend for graduate students ranges from $17,500 to $20,000 depending on the student's terminal degree. Assistantships also include a tuition waiver and health insurance.

Academically qualified students may receive additional scholarship awards. Grant research assistantships and some industrial and Graduate School fellowships may also be available.

RA and TA appointments allow for 12 credit hours of advanced study each semester. The applicant's academic record and research potential determine the financial assistance offered. Student's who receive financial assistance are expected to continue their appointment during the summer session as well, as these appointments are year long positions.

Chemical Engineering Faculty

Baolin Deng
C. W. LaPierre Professor and Chair, PhD, Johns Hopkins University. Environmental nanotechnology, membrane separation, and contaminant transformation.

continued on next page

Pinar Akcora
assistant professor, PhD, University of Maryland-College Park. Polymer composites, nanoparticles, biomaterials.

Matthew Bernards
assistant professor, PhD, University of Washington. Biomaterials, proteins & cells at interfaces, and tissue engineering.

Paul C. H. Chan
director of undergraduate studies, associate professor, PhD, California Institute of Technology. Chemical reactor and process dynamics.

Thomas R. Marrero
professor, associate director of the Capsule Pipeline Research Center, PhD, University of Maryland. Coal log transport, mass transport.

Patrick Pinhero
director of graduate studies, associate professor, PhD, University of Notre Dame. Chemical interactions at surfaces of applied materials, corrosion & environmental aging, heterogeneous catalysis, film growth and tribology.

David G. Retzloff
associate chair, associate professor, PhD, University of Pittsburgh. Mathematical analysis and modeling of chemical processes.

Galen J. Suppes
professor, PhD, Johns Hopkins University. Fuels, fuels processing, alternative fuel sources.

John Gahl
adjunct professor, PhD, Texas Tech University. Materials, plasma and nuclear science.

William A. Jacoby
adjunct associate professor, PhD, University of Colorado. Environmental processing, bioremediation.

Stephen J. Lombardo
adjunct associate professor, PhD, University of California-Berkeley, Ceramic materials, ceramic processing.

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Application and Admission Information

Admission Contact Information

Department of Chemical Engineering
W2030 Lafferre Hall
Columbia, MO 65211
573-882-3563

Master of Science in Chemical Engineering

Admission Criteria

- Minimum GPA: 3.0

Consideration is given to grade trends, performance in the area of chemical engineering and mathematics and other criteria bearing on a student's probable success in graduate study. Selected students with less than a 3.0 overall GPA may be considered on a probationary basis.

Financial support is competitive and requires a minimum 3.0 GPA. Graduates holding degrees in physics, chemistry, applied mathematics and related fields also may be considered for candidacy, but are required to take additional course work.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Chemical Engineering Program:

- Résumé
- Statement of Purpose
- 3 letters of reference
- GRE scores

Financial Aid from the Program

All applicants are considered for internal assistantships, fellowships, and other funding packages. Support is awarded based on availability and qualifications of applicant.

MS Plan of Study

An individual program of a minimum of 30 semester hours is required

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and includes seminars, advanced courses in chemical engineering, physical and chemical sciences, mathematics and no more than nine hours of research or other unscheduled work. No foreign language or collateral field is required. A thesis is required and a candidate will complete the master's program by passing an examination in defense of the thesis.

Doctorate in Chemical Engineering

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Chemical Engineering Program:

- Résumé
- Statement of Purpose
- 3 letters of reference
- GRE scores

PhD Plan of Study

An applicant for the PhD program must take a qualifying examination and a comprehensive examination. Twenty-one semester hours of course work beyond the MS degree is required. Before being admitted to candidacy and proceeding to prepare a dissertation, the student must pass a comprehensive examination. The exam involves a project to be completed within a 30-day period, requiring original and creative work in delineating a research problem of some substance. A dissertation is required of all candidates. A final oral examination will be held where the candidate defends their dissertation.

Courses

See Chemical Engineering (CH ENG) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Chemistry Graduate Programs

Contact Information

College of Arts and Science
125 Chemistry Building
573-882-8374
http://chemistry.missouri.edu/

About the Degrees: PhD in Chemistry

The Department of Chemistry offers graduate degrees in all areas of modern chemistry, including analytical, biological, computational, inorganic, organic, physical and radiochemistry.

Resources and Facilities

The Department has well-equipped laboratories that contain state-of-the-art instrumentation and computing facilities for research. Major instrumentation includes NMR, X-ray diffraction and mass spectrometry centers, as well as a nuclear/radiochemistry lab. Other campus facilities widely used by the Department include a central instrument shop, electronics shop, campus computing center and a 10-megawatt nuclear reactor. The latter provides a high neutron flux for radioisotope production, neutron activation analysis and neutron diffraction studies.

Internal Funding

Fellowships and teaching and research assistantships are available for highly qualified applicants. Application forms are available on the Department's Web site and should be submitted by April 1.

Chemistry Faculty

Jerry L. Atwood
chair, Curators' Professor, PhD, University of Illinois at Urbana-Champaign.

Timothy E. Glass
associate chair for graduate studies, associate professor, PhD, Stanford University.

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John E. Adams
associate chair for undergraduate studies, professor, PhD, University of California-Berkeley.

Lesa J. Beamer
associate professor, PhD, Johns Hopkins University.

Jason W. Cooley
assistant professor, PhD, Arizona State University.

Carol A. Deakyne
associate professor, PhD, Princeton University.

Kent S. Gates
Schlundt Professor of Chemistry, PhD, Northwestern University.

Rainer E. Glaser
professor, PhD, University of California-Berkeley.

C. Michael Greenlief
associate professor, PhD, University of Texas-Austin.

Michael Harmata
Rabjohn Distinguished Professor of Chemistry, PhD, University of Illinois at Urbana-Champaign.

M. Frederick Hawthorne
professor, PhD, University of California, Los Angeles.

Timothy J. Hoffman
associate professor, PhD, University of Missouri.

Renee D. Jiji
assistant professor, PhD, Arizona State University.

Silvia S. Jurisson
professor, PhD, University of Cincinnati.

Steven W. Keller
associate professor, PhD, University of California-Berkeley.

continued on next page

Susan Z. Lever
associate professor, PhD, North Carolina State University.

J. David Robertson
professor, PhD, University of Maryland, College Park.

Thomas Sewell
Associate professor, PhD, Oklahoma State University-Stillwater.

Paul R. Sharp
professor, PhD, Massachusetts Institute of Technology.

John J. Tanner
professor, PhD, Brown University.

Donald L. Thompson
professor, PhD, University of Arkansas.

Sheryl A. Tucker
professor, associate dean of the Graduate School, PhD, University of North Texas.

Wynn A. Volkert
professor, PhD, University of Missouri.

Graduate Degree Requirements

Students are strongly encouraged to visit the Department of Chemistry Web site for the most up-to-date information.

Entrance Criteria

An applicant for graduate work in chemistry should have either a Bachelor of Arts or Bachelor of Science degree in chemistry, essentially equivalent to those awarded at MU, with at least a B average or a score at the 70th percentile on the GRE general test.

Examinations

All new graduate students in chemistry are required to take Departmental placement/qualifying examinations in all core areas (analytical, inorganic, organic and physical) prior to registration.

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Students must qualify in two areas. A student who performs well on an exam, as determined by the department's Graduate Program Committee, will be considered to have qualified in that area. Students who do not qualify in particular areas, via the placement examinations, must pass appropriate advanced-level courses in those areas to qualify. An A or B grade is required in these courses for qualification.

Research, Advising, and the Committee
Affiliation with research adviser must be made by the end of the first semester through a formal process that is part of CHEM 7087. Student progress in the degree program is evaluated annually in May, using the Graduate Student Progress System through the Graduate School. In addition, the student's Graduate Program Committee meets with the student and their research adviser after their first summer of research to review degree progress. At this time the student will have submitted a formal Research Progress Report to their committee for consideration. All students are expected to attend Departmental Colloquium and Organic/DyNAMITE seminars.

Doctorate in Chemistry

Admission Contact Information
Jerry Brightwell (gradchem@missouri.edu)
125 Chemistry; Columbia, MO 65211
573-884-6832

Admission Criteria
- Fall deadline: April 1
- Spring deadline: October 15
- Minimum TOEFL score: 600/100 (paper/internet)
- Minimum GRE score: V=450, Q=600, A=3.0-4.0

Required Application Materials
To the Graduate School:
- All required Graduate School documents

To the Chemistry Program:
- Departmental Application (PDF)
- GRE scores
- 3 letters of recommendation

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- Transcripts from each college and university you have attended
- Statement of Purpose, which should include a summary of why you are interested in pursuing an advanced chemistry degree, a brief description of your previous research experiences, the specific area of chemistry you are interested in pursuing, and your future career goals and plans in the chemistry field.

Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Doctoral Degree Requirements
The following is a brief synopsis of the general degree requirements; please see the Department of Chemistry Web site for complete details:

1. Students must take at least 5 8000-level courses outside their own research concentration.
2. Students must pass 5 written cumulative exams within a specific time frame.
3. Students must present at least one departmental seminar.
4. Students are required to complete a comprehensive exam, which includes written and oral elements, within a specific time frame.
5. Students must present an oral summary of their dissertation research to their Doctoral Committee.

Program Committees
Three months before their scheduled defense, students must submit and defend a dissertation describing the results of successful and original research in one of the branches of chemistry.

Courses

See Chemistry (CHEM) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Civil and Environmental Engineering Graduate Programs

Contact Information

Jennifer Keyzer-Andre (keyzerandrej@missouri.edu)
Graduate Program Coordinator
573-882-4442
http://www.civil.missouri.edu

About the Program

Civil engineering education at MU began in 1856 with the establishment of the first Chair of Civil Engineering. Graduate programs offered by the department prepare students for leadership positions in academia, research and advanced practice engineering careers. Major program areas include structural mechanics, structural engineering and materials, geotechnical and geoenvironmental engineering, environmental engineering, hydrology and water resources engineering and transportation engineering.

Areas of Study

Structural Mechanics, Structural Engineering and Materials. Emphasis areas: fracture and failure of composites, model-based simulation, inelastic response of materials and structures, bridge engineering, linear and nonlinear structural dynamics, explosion resistant structural design, timber engineering, microstructure of porous materials, concrete and aggregate durability, advanced fiber reinforced composites for construction and nondestructive structural health evaluation

Environmental Engineering. Emphasis areas: water pollution control, water purification, wastewater treatment, the disposal of residues from these processes and hazardous and solid waste management . Other areas of research include the application of physical, chemical and microbiological principles to design of water supply systems, pollution control facilities and contaminant transport through soils.

Geotechnical and Geoenvironmental. Emphasis areas: strength, deformation and flow properties of earthen materials and application of

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this understanding to foundation engineering, slope stability analyses, earth structures design, and geoenvironmental challenges. Research areas include: soil improvement techniques, geosynthetics, landfills and waste containment, stabilization and maintenance of earth slopes, in situ soil cleanup technologies, geotechnical earthquake engineering, nondestructive evaluation technologies for subsurface applications, risk analysis and reliability-based design.

Transportation Engineering. Emphasis areas: traffic engineering, intelligent transportation systems, highway safety, network modeling and simulation, geographic information systems, security and evacuations, transportation planning, traffic flow theory, highway design, intersection operations, bicycle and pedestrian facilities, infrastructure management, driver behavior, airport engineering, transportation legal issues, artificial intelligence and advanced computing applications in transportation.

Hydrology and Water Resources. Emphasis areas: hydrologic, hydraulic, regulatory/public policy and geographic information system applications for transportation, surface water quality and storm water management and decision making.

Facilities and Resources

The department has laboratories for experimental research in structural engineering, materials, geotechnical and geoenvironmental engineering, environmental engineering, and transportation engineering.

Structural Testing. Several computer-controlled electrohydraulic testing machines and associated instrumentation are available in the high-bay structural engineering and materials engineering laboratories. The laboratories are serviced by a 5-ton overhead crane. An additional structural testing facility located south of the campus houses a 100-foot by 20-foot structural floor with anchor points on a 4-foot-square grid. This high-bay facility is serviced by a 10-ton overhead crane. There is also a materials laboratory for concrete mix design and evaluation.

Geotechnical Testing. The laboratories house state-of-the-art permeability, consolidation, triaxial, geosynthetics, soil dynamics and unsaturated soil mechanics testing equipment and is home to the Soil

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Characterization Laboratory. Additional laboratories include facilities and equipment for large-scale model testing of slopes, piles and other geotechnical systems, including a 10-acre geotechnical experiment site.

Environmental Testing Labs. The Laboratories are supplied with analytical equipment for the complete physical, chemical and microbiological analysis of water and waste water.

Transportation Laboratory. The labs include computer softwares: Translab and Translab TMC, capabilities in advanced surveillance and video image processing, traffic management and control, driver behavior, and safety.

Funding

In addition to fellowships supported by the National Science Foundation (NSF), the US Environmental Protection Agency, Federal Highway Administration and other governmental agencies, several graduate assistantships are available each year. The assistantships are primarily research appointments; however, the Department does make a limited number of teaching assistantship appointments. Most assistantships offer tuition waivers and health insurance.

Civil and Environmental Engineering Faculty

Mark R. Virkler

chair, professor, PhD, PE, University of Virginia. Transportation engineering.

Shankha K. Banerji

professor emeritus, PhD, PE, University of Illinois. Environmental Engineering.

John J. Bowders

William A. Davidson Professor of Civil Engineering, director, Institute for Interdisciplinary Geotechnics and the Soil Characterization Lab, PhD, PE, The University of Texas at Austin. Geotechnical engineering.

Zhen Chen

C.W. LaPierre Professor, PhD, University of New Mexico. Engineering mechanics.

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Thomas E. Clevenger
director, Missouri Water Resources Research Center, professor, PhD, University of Missouri. Environmental engineering.

Baolin Deng
C.W. LaPierre Professor, director of graduate studies, PhD, Johns Hopkins University. Environmental engineering.

Praveen Edara
assistant professor, PhD, Virginia Polytechnic Institute and State University. Transportation engineering.

V. S. Gopalaratnam
professor, PhD, PE, Northwestern University. Structural/materials engineering.

Enos Inniss
assistant professor, PhD, Notre Dame. Environmental Engineering.

R. David Hammer
professor emeritus, PhD, University of Tennessee. Soil science.

Zhiqiang Hu
assistant professor, PhD, PE, University of Connecticut. Environmental Engineering.

Sam A. Kiger
C.W. LaPierre Professor, director, Explosion Resistant Design Center, PhD, PE, University of Illinois. Theoretical and applied mechanics.

Charles Lenau
professor emeritus, PhD, PE, Stanford University. Hydraulics engineering.

William J. Likos
associate professor, PhD, Colorado School of Mines. Geotechnical engineering.

J. Erik Loehr
James C. Dowell Associate Professor, PhD, PE, The University of Texas at Austin. Geotechnical engineering.

continued on next page

Timothy C. Matisziw
assistant Professor, PhD, Ohio State University. Transportation engineering

Jay B. McGarraugh
professor emeritus, PhD, PE, Purdue University. Structural engineering.

Charles J. Nemmers
director, Transportation Infrastructure Center., PE, Marquette University.

Sarah Orton
assistant professor, PhD, The University of Texas at Austin. Structural engineering.

Brent Rosenblad
associate professor, PhD, The University of Texas at Austin. Geotechnical engineering.

Hani Salim
associate professor, PhD, West Virginia University. Structural engineering.

Carlos Sun
associate director, Transportation Infrastructure Center, director of graduate studies, associate professor, PhD, PE, University of California-Irvine, Transportation engineering.

Kathleen M. Trauth
associate professor, PhD, PE, Texas Tech University. Water resources/environmental engineering.

Glenn Washer
associate professor, PhD, PE, Johns Hopkins University. Nondestructive Evaluation/Structural engineering.

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Master of Science in Civil Engineering

Jennifer Keyzer-Andre
keyzerandrej@missouri.edu
Graduate Program Coordinator
573-882-4442
573-882-4784 (fax)
http://www.civil.missouri.edu

Admission Criteria

Fall deadline: February 15
Spring deadline: September 15

- Priority admission and funding consideration are given to applications received by February 15/September 15. Applications submitted after February 15/September 15 will be considered, with preference going to those received by May 1/December 1. Prospective students applying after May 1/December 1 will be considered for fall admission on a case by case basis.
- Minimum TOEFL score: 550/79 (paper/internet)
- Minimum IELTS 6.5/6
- Minimum GRE score: test is required; no minimum score set, however accepted students typically score a combined 1100 in Quantitative + Verbal sections and between a 4.0 and 5.0 in the Analytical section.
- Minimum GPA: 3.0 in last 2 years of coursework
- BS in engineering. Applicants with BS degrees in related fields may be considered for admission. If admitted, non-engineers are required to complete remedial courses as determined by their adviser and advisory committee.

Lower than 3.0 GPAs require special action and substantiation such as good test scores on the GRE or other recognized examinations.

Required Application Materials

To the Graduate School:
All required Graduate School documents

To the Civil Engineering Program:
Please upload all of the following items to the Apply Yourself/Graduate School System. Please **DO NOT** send any hard copies to the Civil Engineering department.

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- Departmental Application
  http://engineering.missouri.edu/civil/downloads/CEE Application2010.pdf
- 3 Letters of Recommendation
  - At least two from a faculty member who has taught or advised you
- GRE scores
- Résumé
- Statement of Purpose
  - See guidelines: http://engineering.missouri.edu/civil/degree-programs/Statement of Purpose Examples.php

Financial Aid from the Program
If you wish to be considered for financial aid, please complete the financial aid section of the departmental application.

Electronic submissions of all application materials are preferred; however, paper submittals will be accepted.

Master of Science Plan of Study
Students are accepted for advisement upon CE Graduate Admissions Committee review. The master's program requires a minimum of 30 credit hours, at least 15 hours of which must be 8000-level courses or research (CV_ENG 8990) and at least one credit of 8000-level graduate seminar in an appropriate area.

Thesis and Examination
A final oral examination is required of all master's candidates. Approximately two weeks before this examination, a candidate must submit to an examining committee a thesis, a formal report or a design of professional quality applying the knowledge gained in course work to the solution of an engineering problem. Students who receive research appointments or traineeships are required to submit a thesis. Formal or design report is at the discretion of the advisor.

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Doctorate in Civil Engineering

Jennifer Keyzer-Andre
keyzerandrej@missouri.edu
Graduate Program Coordinator
573-882-4442
573-882-4784 (fax)
http://www.civil.missouri.edu

Admission Criteria
Fall deadline: February 15
Spring deadline: September 15

- Priority admission and funding consideration are given to applications received by February 15/September 15. Applications submitted after February 15/September 15 will be considered, with preference going to those received by May 1/December 1. Prospective students applying after May 1/December 1 will be considered for fall admission on a case by case basis.
- Minimum TOEFL score: 550/79 (paper/internet).
- Minimum IELTS 6.5/6.
- Minimum GRE score: test required, however accepted students typically score a combined 1100 in Quantitative + Verbal sections and between a 4.0 and 5.0 in the Analytical section.
- Minimum GPA: 3.0 (both MS and BS degrees)

Required Application Materials
To the Graduate School:
All required Graduate School documents

To the Civil Engineering Program:
Please upload all of the following items to the Apply Yourself/Graduate School System. Please **DO NOT** send any hard copies to the Civil Engineering department.

- Departmental Application
  http://engineering.missouri.edu/civil/downloads/CEE Application2010.pdf
- 3 Letters of Recommendation
  - At least two from a faculty member who has taught or advised you
- GRE scores
- Résumé

continued on next page

- Statement of Purpose
  - See guidelines: http://engineering.missouri.edu/civil/degree-programs/Statement of Purpose Examples.php

Financial Aid from the Program
If you wish to be considered for financial aid, please complete the financial section of the departmental application.

Qualifying for Candidacy
Students are accepted for advisement upon CE Graduate Admissions Committee review. Formal acceptance to the PhD program is based on a written and oral qualifying examination, administered by faculty members in the student's area of concentration, during the first year of post-master's work. In cases where students desiring PhD candidacy take a master's degree with thesis option in this department, the master's oral examination may be combined with the oral qualifying examination at the discretion of the advisor and dissertation committee.

Plan of Study
PhD programs are committee administered and tailored to fit the needs of each individual student. A minimum of 72 credit hours, including the credit hours taken during the MS program beyond the bachelor's degree, is required. Students who received the MS degree from other than MU may transfer up to 30 hours of credit from their MS degree. The candidate must pass a comprehensive examination and submit and defend a dissertation at a final oral examination.

More Information
More information about the Department of Civil and Environmental Engineering and further details about specific programs and application materials may be obtained from the department's Web site: http://www.civil.missouri.edu.

Courses

See Civil Engineering (CV ENG) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Classical Studies Graduate Programs

Contact Information

College of Arts and Science
405 Arvarh Strickland Hall
573-882-0679
http://classics.missouri.edu/

About the Program

The Department of Classical Studies offers graduate work leading to the master of arts degree in classical languages with emphasis on Latin, Greek or both classical languages. The PhD degree in classical studies requires work in both Greek and Latin.

Career Preparation

Graduate programs in classical studies are designed to prepare students for professional careers as teachers and scholars of classical literature and ancient civilization. Besides acquiring expertise in the traditional classical disciplines, students are encouraged to become familiar with other areas, such as later literatures and cultures, on which the classical tradition has exercised a decided effect.

Facilities and Resources

Because MU is a contributing member of the American Academy in Rome and the American School of Classical Studies in Athens, the facilities of those organizations are available to graduate students from Missouri. Study in Athens or Rome is often feasible after the completion of a master's degree. On campus, students have at their disposal the resources of Ellis Library, which are excellent in the major fields of Greek and Latin languages and literatures, and in ancillary fields. This collection is supplemented by the department's Walter Miller Collection. The Museum of Art and Archaeology contains many items of interest to classicists.

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Classical Studies Faculty

Dennis E. Trout
chair, associate professor, PhD, Duke University. Late antiquity, Roman history, epigraphy.

Barbara P. Wallach
associate professor, PhD, University of Illinois. Classical rhetoric and oratory, Lucretius, Cicero.

Daniel M. Hooley
professor, PhD, University of Minnesota. Classical tradition, translation studies.

John M. Foley
professor, PhD (English and comparative literature), University of Massachusetts. Oral tradition, Homer.

David J. Schenker
associate professor, PhD, University of California. Greek drama, Plato.

Charles Saylor
professor, PhD, University of California. Roman comedy, Latin literature.

Theodore A. Tarkow
professor, PhD, University of Michigan. Greek drama, Greek lyric poetry.

James McGlew
associate professor, PhD, University of Chicago. Greek political Culture; Archaic and Classical Greek Literature.

Raymond Marks
associate professor, director of graduate studies, PhD, Brown University. Roman epic, post-Augustan poetry.

Anatole Mori
associate professor, PhD, University of Chicago. Hellenistic poetry, epic.

Richard Foley
assistant professor, PhD, Northwestern University. Ancient philosophy, David Hume.

continued on next page

Michael Barnes
assistant teaching professor, PhD, University of Missouri. Greek and Roman epic, classical tradition.

Master of Arts in Classical Studies

Admission Contact Information

Raymond Marks (marksr@missouri.edu)
405 Arvarh Strickland Hall, Columbia, MO 65211
573-882-0679

Admission Criteria

- Fall deadline: April 1, Deadline for teaching assistantship applicants: February 1
- Spring deadline: November 1
- Minimum TOEFL score: 500/173/61 (paper/computer)
- Minimum GRE score: not set
- Minimum GPA: 3.0 during last 2 years
- Bachelor of arts degree from an accredited college or university
- Reading knowledge of Greek and/or Latin
- GPA of at least 3.0 in Greek and/or Latin courses

Required Application Materials

To the Graduate School:

- 3 letters of recommendation
- Statement of interest
- 10-20 pp. writing sample
- Transcripts
- GRE scores

Application materials that cannot be submitted directly to the Graduate School may be sent to the Classical Studies program.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

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Plan of Study

The minimum course of study is 30 semester hours. Of these, at least 12 hours in Greek, Latin, classics and related fields must be at the 8000/9000 level or above, and at least six hours must be in courses in other departments. At least 21 of the 30 hours must be completed in Greek, Latin or classics in the department. Classics 7000 is required of all students during their first year of graduate study. Students who wish to have a minor may take 10-12 hours in another department or complete an ancient studies minor.

Languages

Some command of German and French (or Italian) is helpful from the outset, and MA candidates are required to have demonstrated proficiency in one of the languages by the time that they begin their second year of graduate study. Degree candidates take MA language tests (Latin and/or Greek) in the 2nd or 3rd year of graduate studies.

Written Works and Oral Examination

A final oral examination is given by a faculty committee selected by the student in consultation with the adviser. This examination will include defense of either the thesis or a compiled portfolio of seminar papers. If the former option is elected, the thesis will account for six credit hours.

Doctorate in Classical Studies

Admission Contact Information

Raymond Marks (marksr@missouri.edu)
405 Arvarh Strickland Hall, Columbia, MO 65211
573-882-0679

Admission Criteria

- Fall deadline: April 1, Deadline for teaching assistantship applicants: February 1
- Spring deadline: November 1
- Minimum TOEFL score: 500/173/61 (paper/computer)
- Minimum GRE score: not set
- MA with a major in Greek, Latin or classics, or the equivalent of a minimum of 21 hours of graduate work in the language(s). Reading knowledge of Greek and Latin and a reading knowledge of German and French (or Italian)

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Required Application Materials
To the Graduate School:
- 3 letters of recommendation
- Statement of interest
- 10-20 pp. writing sample
- Transcripts
- GRE scores

Application materials that cannot be submitted directly to the Graduate School may be sent to the Classical Studies program.

Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Language Requirements
Proficiency in one of the modern foreign languages (i.e., French, German, or Italian) must be demonstrated by the time of registration for the second year of graduate study; proficiency in the second language must be demonstrated by the time of registration for the third year.

Plan of Study
A minimum of 72 hours of graduate credit is required for the PhD degree. A maximum of 30 hours of this total may consist of hours transferred from the MA degree. At least 21 additional hours must be taken in the department at the graduate level. A minimum of eight hours of dissertation credit is required. At least two courses in related ancient fields, one of which must be in ancient history or classical archaeology, must be taken at the graduate level. Proficiency in Greek and Latin composition must be demonstrated at some point by course work or examination.

Minors and Areas of Concentration
All candidates must include in their plan of study a minor or area of concentration consisting of at least 12 hours at the graduate level outside the department. Suggested areas include ancient history, classical archaeology, the classical tradition, late antiquity, the oral

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tradition, rhetoric, or romance languages. A structured minor in ancient studies also is available.

Examinations
All candidates are required to complete two four-hour qualifying examinations, one in Greek and one in Latin.

Comprehensive: Written
After completing residency, language, and course requirements, PhD candidates must pass the comprehensive examination consisting of four written examinations in the following fields: Greek literature, Latin literature, special author or topic, and area of concentration or minor field. With the approval of the adviser and the candidate's committee, extra course work beyond the required 12 hours may be substituted for the written examination in the area of concentration or minor field. Ancient Studies minors are automatically excused from the examination in the minor field.

Comprehensive: Oral
The oral comprehensive examination is taken only after the candidate successfully passes the written examinations.

Dissertation
Within one month of completion of both written and oral comprehensive exams, or at the beginning of the Fall term if the exams are taken in May, the candidate must meet with the doctoral program committee to obtain formal approval of the dissertation topic. Continuous enrollment must be maintained while the candidate completes the dissertation. At least eight hours of dissertation credit are required. A final oral defense of the dissertation is held upon completion of the dissertation.

Courses

See Classical Studies graduate courses in the myZou online system.
See Classics (CLASS)
See Greek (GREEK)
See Latin (LATIN)

END OF PROGRAM DESCRIPTION

Minor in College Teaching

Contact the Adviser
Ashley Siebenaler, siebenalera@missouri.edu
Doctoral Academic Adviser, Graduate School
210 Jesse Hall
573-884-8006

Contact the Coordinator
Lee Wilkins, wilkinsl@missouri.edu
Faculty Fellow, Minor in College Teaching Coordinator
210 Jesse Hall

About the Minor in College Teaching

Approximately 75 percent of faculty positions in the United States are at institutions where the importance of teaching and professional service is equal to or greater than the emphasis on research. The Minor in College Teaching, available to all degree-seeking graduate students at Mizzou, demonstrates your preparation as an effective teacher to potential employers. Learn how to apply.

The minor requires 9 credit hours beyond your major plan of study (learn more about the minor's requirements).

What the Minor Can Do for You

- Help you gain meaningful experience through a mentored teaching practicum
- Increase your knowledge about learning and pedagogy
- Prompt you to engage in careful reflection about your own teaching philosophy and strategies
- Extend your understanding of current issues in higher education

Eligibility

The minor is available to all doctoral students at the University of Missouri.

Minor Plan of Study

9 credit hours beyond major plan of study

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Can I Still Graduate On Time?

For many students, the 9 hours required for the minor can be accommodated by planning to take some of their required course work during the summer. Some doctoral students complete the minor after they have taken their comprehensive examinations and are continuously enrolled.

Core Course (3 hours)

Students must complete one of the following core courses:

- College Teaching (Educational Leadership & Policy Analysis 9448)
- College Teaching of Agriculture (Agricultural Education 8350)
- College Science Teaching (Biological Sciences 8724/Curriculum & Instruction 8724)

Teaching Practicum

See Guidelines for the Practicum for more information. Established coursework includes the following set of courses. Students can also establish appropriate teaching practice on an individual basis. Students must complete a teaching practicum and teaching portfolio, but do not have to officially register for one of the graduate courses below, however enrollment in practicum credit hours will be reflected on one's official MU transcript. Please consult the coordinator or adviser for further information.

- Agricultural Education Teaching Practicum (Ag Ed 8995)
- Seminar in Speech Education (Comm 8220)
- Internship in Educational Leadership & Policy Analysis (EL 9481)
- Human Development & Family Studies Teaching Practicum (HDFS 9100)
- Nursing Teaching Practicum (Nurs 8950)
- Teaching of Philosophy (Phil 8210)
- Internship: College Teaching in Special Education (SpEd L9940)
- Teaching of Psychology Practicum (PSY 9910)

Elective Courses (total of 3-6 elective hours)

Teaching with Technology Electives

- College Teaching with Technology I (EL/SISLT 7822)
- College Teaching with Technology II (EL/SISLT 7823) Prerequisite: EL/SISLT 7822

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Disciplinary Teaching Elective Courses Offered

Agricultural Education
- AG ED 8330 Advanced Methods of Teaching Agriculture
- AG ED 8350 College Teaching of Agriculture

Animal Science
- AN SCI 8725 Science Outreach: Public Understanding of Science

Biological Sciences
- BIO SC 8725 Science Outreach: Public Understanding of Science

Classics
- CLASS 7700 Advanced Study in the Teaching of the Classics

Educational Counseling Psychology
- ESC PS 7100 Foundations of Educational Psychology
- ESC PS 7115 Human Learning
- ESC PS 7350 Advanced Human Learning
- ESC PS 8350 Applications of Human Learning Principles

Educational Leadership & Policy Analysis
- ED LPA 9440 Race, Gender, and Ethnicity in Higher Education
- ED LPA 9441 The Adult Learner
- ED LPA 9442 Curriculum Philosophy and Development in Higher Education
- ED LPA 9555 The Community College
- ED LPA 9447 College Student Culture and Environment
- ED LPA 9459 International Education and National Development
- ED LPA 9449 History of Higher and Continuing Education in the United States

English
- ENGLISH 7650 Principles of Teaching English as a Second Language

Information Science & Learning Technologies
- IS LT 9471 Instructional Systems Design

Learning, Teaching, & Curriculum
- LTC V 7810 Technology and Industry Education Methods
- LTC V 7830 Curriculum Content in Marketing Education

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- LTC V 7840 Methods of Teaching Marketing Education
- LTC V 8900 Seminar in Curriculum and Instruction (same as Bio Sc 8725)

Nursing
- NURSE 8850 Teaching Nursing
- NURSE 8852 Curriculum Development and Teaching Strategies

Philosophy
- PHIL 8210 Teaching of Philosophy
- PHIL 8220 Teaching of Philosophy II

Psychological Sciences
- PSYCH 9150 Human Learning and Memory

Physics & Astronomy
- PHYSCS 8040 Study of Techniques of Teaching College Physics
- PHYSCS 8325 Science Outreach: Public Understanding of Science

Romance Languages
- RM LAN 7120 Foreign Language Teaching Methodology

Special Education
- SPC ED 8515 Cross-Categorical Teaching Methods

Application Information for the Minor in College Teaching

Before taking courses, submit an application (PDF) that includes a list of courses you will take, plus your adviser's signature.

When finished, submit a program completion form (PDF), along with your practicum portfolio, to the Graduate School, 210 Jesse Hall.

Go to http://gradschool.missouri.edu/programs/minor-college-teaching/apply for more information.

END OF PROGRAM DESCRIPTION

Communication Graduate Programs

Contact Information

College of Arts and Science
115 Switzler Hall
573-882-4431
http://communication.missouri.edu/

About the Program

The program takes a theoretical, critical, and experimental approach to the study of communication. The MA program is designed to further enhance the understanding of the communication process by allowing students to study various aspects of communication in greater depth. Graduates are employed in corporate communications, educational and instructional media, sales, research and consulting. The doctoral program is designed for those interested in an academic career of college or university teaching and research. Doctoral students graduate with a strong theoretical background in interpersonal, organizational, mass media, or political communication.

Funding

Graduate students are eligible to apply for fellowships and graduate teaching assistantships. Funding is normally limited to doctoral students.

Communication Faculty

Loreen N. Olson
chair, associate professor, PhD, University of Nebraska. Relational communication, gender communication, and family communication.

Loren Reid
professor emeritus, PhD, University of Iowa. Rhetoric and public address.

Debbie S. Dougherty
director of graduate studies, associate professor, PhD, University of Nebraska. Organizational communication, qualitative research methods, destructive workplace processes, social class.

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Mitchell McKinney
associate professor, PhD, University of Kansas. Political communication, rhetoric.

Michael J. Porter
associate professor, PhD, University of Iowa. Television audience analysis, visual literacy, structure of television narratives and communication education.

Jennifer Stevens Aubrey
assistant professor, PhD, University of Michigan. Mass media effects, mass media theory, and gender images in the media.

Lissa Behm-Morawitz
assistant professor, PhD, University of Arizona. Mass media effects, new media, gender, and race/ethnicity.

Melissa Click
assistant professor, Ph.D., University of Massachusetts, Amherst. Media and cultural studies, feminist and queer theory, audience and fan studies.

Collin Hesse
assistant professor, Ph.D. Arizona State University. Interpersonal communication, communication and physiology, emotions, quantitative research methods.

Brian Houston
assistant professor, Ph.D. University of Oklahoma. Political Communication, community resilience.

Rebecca Meisenbach
assistant professor, PhD, Purdue University. Organizational rhetoric, identity, nonprofit communication.

David Dunkin
adjunct professor, MA, University of Missouri. Television production and technology.

continued on next page

Michael W. Dunn
Adjunct professor, PhD, University of Michigan. Broadcast management and programming.

Roger Karwoski
adjunct professor, MS, University of Wisconsin, Platteville. Programming and production.

Master of Arts in Communication

Admission Contact Information

Martha Crump (crumpm@missouri.edu)
115 Switzler Hall; Columbia, MO 65211
573-882-4432

Admission Criteria

- Fall deadline: January 15
- Minimum TOEFL score: 600 (paper)
- Minimum GRE score: Preferred: V,Q=500 on each, A=4.0
- Minimum GPA: 3.0
- Students who do not have an undergraduate degree in communication may be required to take course work beyond the required 30 hours to provide necessary background.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Communication Program:

- Departmental Application
- 3 letters of recommendation
- Substantial sample of written work (such as a term paper)
- Transcripts
- Statement of purpose (no more than 500 words) explaining the student's intended field of study, professional goals and other reasons for wishing to enter the graduate program
- GRE scores
- Résumé optional but recommended

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Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Plan of Study
Not more than 6 semester hours of the required 30 hours of credit may be transferred from another university or campus of the University of Missouri System. There is no language requirement. For the assignment of advisers, students should see the director of graduate studies.

Thesis and Nonthesis Options
The master of arts degree may be completed under either a thesis option, approved by an advisory committee, or a non-thesis option (with a comprehensive examination and project). Both plans require a minimum of 30 hours of graduate credit, including at least 15 hours of course work at the 8000/9000 level. MA candidates may take up to 6 hours of credit for their MA project for the non-thesis option. MA candidates take a minimum of 6 hours in 9090 Thesis Research for the thesis option.

Credit Hours for Production
No more than 9 hours of course work or independent study in television production or scriptwriting will be accepted for the MA degree. Students may opt to take more production hours but they may not be included in the candidate's plan of study.

Length of Study
The MA must be completed in 8 years.

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Doctorate in Communication

Admission Contact Information

Martha Crump (crumpm@missouri.edu)
115 Switzler Hall; Columbia, MO 65211
573-882-4432

Admission Criteria

- Fall deadline: January 15
- Minimum TOEFL score: 600 (paper)
- Minimum GRE score: Preferred: V,Q=500 on each, A=4.0
- Minimum GPA: 3.0 preferred
- Admission procedures for students who have completed the MA degree elsewhere and wish to become PhD candidates are identical to the departmental requirements outlined for MA candidates. Only those applicants who show evidence of a clear likelihood of successful doctoral work are admitted.

Required Application Materials

To the Graduate School:
All required Graduate School documents

To the Communication Program:

- GRE scores
- Departmental Application
- 3 letters of recommendation
- Writing sample
- Transcripts
- Statement of Interest
- Résumé optional but recommended

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Plan of Study

Before registering for courses, the student must confer with their temporary adviser until a permanent adviser is assigned.

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Committee and Qualifying Examination

A doctoral program committee approves the student's course of study and reads the qualifying examination during the spring semester of the first year. Only after passing the qualifying examination will the student be admitted to candidacy for the PhD degree in communication.

For a student whose MA program was done at MU, the six-hour comprehensive examination or the MA thesis defense constitutes the qualifying examination. The student may proceed beyond the MA degree only upon the recommendation of the MA examining committee.

Courses

The PhD candidate must take at least 48 hours of course work beyond the MA. Students with an MA degree in another discipline may be required by their doctoral program committee to complete additional course work. Course work will include 36 hours within the department.

The following courses are required:

- Introduction to Graduate Studies (8110)
- Seminar in Quantitative Research Methods (8120)
- Seminar in Communication Theory (9170)
- Research (comprehensive exams) (9050);

And one of the following:

- Seminar in Qualitative Research Methods (8130)
- Rhetorical Criticism (8160)
- Seminar in Television Criticism (8150)
- Content Analysis (8140)

Including the courses listed above, students must complete a total of 15 hours of research methods classes. Six of these hours may be taken outside the department.

Students must also complete a 6-hour collateral field block outside the department representing a coherent unit of study and relates to an area of major research interest.

Comprehensive Examination

The comprehensive examination, including a 30-page literature review, a 15-hour written exam and an oral defense, will cover all areas of

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studies in the field. During the semester students take comprehensive exams they enroll in Communication 9050.

Dissertation
The doctoral dissertation is written under the direction of the candidate's adviser. The dissertation and the final oral examination on the dissertation complete the requirements for the PhD in communication. Students take a minimum of six hours of Communication 9090 Dissertation Research.

Length of Study
Course work and comprehensive exams for the PhD must be completed in five years. The dissertation must be completed within five years of completing comprehensive examinations. Satisfactory rate of progress means making adequate progress to meet these time requirements. Students working at a typical pace should be able to complete the doctorate in 4 years beyond their master's.

Courses

See Communication (COMMUN) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Communication Science and Disorders Graduate Programs

Contact Information

Julie Aston
303 Lewis Hall
573-884-2940
http://www.umshp.org/csd/

About Communication Science and Disorders

The field of Communication Science and Disorders, or CSD, encompasses the related but distinct disciplines of speech-language pathology (SLP), audiology and speech, language, and hearing sciences (SLHS). Speech-language pathologists and audiologists are professionals educated in human communication and its disorders. Speech-language pathologists diagnose and treat disorders such as delayed language development, stuttering, articulation and voice problems. Audiologists specialize in the prevention, identification, assessment and rehabilitation of hearing disorders. Speech, language, and hearing scientists are professionals concerned with exploring trends in the communication sciences, as well as developing strategies for improving or adding to the knowledge base within the fields of speech-language pathology and audiology.

MU established its first independent master's and doctoral programs in speech-language pathology and audiology in the 1940s. The MU master's degree program in speech-language pathology has been continuously accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology since 1966. An active local chapter of the National Student Speech Language Hearing Association is sponsored by the program.

Degrees Offered

- MHS in communication science and disorders, with an emphasis area in speech-language pathology
- PhD in communication science and disorders

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The master's degree prepares students for national certification in speech-language pathology and for professional clinical practice in both health care and educational settings.

The doctoral degree involves a program of research and advanced study beyond the clinical master's degree in preparation for a career in research and college teaching or administration.

Career Opportunities

A wide variety of work settings are available to speech-language pathologists and audiologists. Possibilities range from hospitals, clinics, and rehabilitation centers to schools, colleges and universities, government agencies, and private practice. Speech, language, and hearing scientists work primarily in colleges and universities, research labs and government agencies. Professional certification in speech-language pathology and audiology is awarded by the American Speech-Language-Hearing Association (ASHA). The master's degree, which is the entry-level degree for speech-language pathologists, typically takes two to three years beyond the undergraduate degree depending on the student's undergraduate field of study. A clinical doctorate in audiology (AuD), the entry-level degree for audiologists, typically requires three to four years beyond the undergraduate degree.

Facilities and Resources

The department uses many cooperative facilities in Columbia, both on and off the MU campus, as clinical and scientific resources. Among these are the University Hospitals and Clinics, Rusk Rehabilitation Center, Ellis Fischel Cancer Center, Truman Memorial Veterans Hospital, Adult Day Connection, Assistive Technology Evaluation Center, Thompson Center for Autism and Neurodevelopmental Disorders, Missouri Rehabilitation Center, and Columbia Public Schools. Other cooperative facilities are available both within and outside the state. The department operates the MU Speech and Hearing Clinic, a diagnostic and treatment center serving individuals with communication disorders from the campus and the community, the MU Robert G. Combs Language Preschool, and the Accent Modification and Pronunciation Program. In addition, there are many research opportunities for students in the laboratories of individual faculty where they may gain experience with sophisticated equipment for research and clinical evaluation in normal and disordered speech, language, and

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hearing. A master's Thesis option is available to students interested in conducting research.

Funding
Graduate students are eligible to apply for scholarships, fellowships, work-study grants, traineeships and
graduate teaching assistantships

Communication Science and Disorders Faculty

Barbara Brinkman
director of the MU Speech and Hearing Clinic, clinical associate professor, MA, University of Colorado. Speech-language pathology.

Linda S. Day
research associate professor, PhD, University of Missouri. Speech-language pathology, language science.

Mary K. Fagan
assistant professor, PhD, University of Missouri. Speech-language pathology.

Dana R. Fritz
director of the MU Robert G. Combs Language Preschool, coordinator of the MU Accent Modification and Pronunciation Program, clinical assistant professor, PhD, University of Missouri. Speech-language pathology.

Judith C. Goodman
chair, associate professor, PhD, University of Chicago. Language science.

Leanna B. Lawrence
clinical instructor, MHS, University of Missouri. Speech-language pathology.

Teresa E. Lever
assistant professor, PhD, East Carolina University. Speech-language pathology.

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Barbara A. McLay
program director and director of graduate studies, clinical associate professor, MA, University of Iowa. Audiology.

Nandhakumar Radhakrishnan
assistant professor, PhD, Bowling Green State University. Speech-language pathology.

Mary Ann Scheneman
clinical assistant professor, MEd, University of Virginia. Speech-language pathology.

Stacy A. Wagovich
associate professor, PhD, University of Georgia. Speech-language pathology.

Adjunct Faculty

Lyanne Riley
adjunct clinical assistant professor, PhD, University of Missouri. Speech-language pathology.

Master of Health Science, Emphasis in Speech-Language Pathology

Admission Contact Information

Julie Aston (mucsd@missouri.edu)
303 Lewis Hall; Columbia, MO 65211
573-884-2940

Admission Criteria

- Deadline for Fall entrance: February 1
- Deadline for Summer entrance: February 1
- Deadline for Spring entrance (for applicants without prerequisite course work in CSD only): October 15
- Minimum TOEFL score (if English is not first language): 600/250/100 (with 28 on speaking) (Paper/Computer/Internet)
- Minimum GRE score: prefer at least 1000 on v+q (although not required)
- Undergraduate GPA: 3.0 (on last 60 hours of course work)

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Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Communication Science and Disorders Program:

- Departmental Application
- 3 letters of recommendation
- Statement of interest
- GRE scores
- Personal interviews may be requested

Admission Process

Acceptance for admission to master's level study is determined by the Departmental Graduate Admissions Committee.

Prerequisite Course Work

If the student's undergraduate major is in a field other than communication disorders, the MHS program will require a minimum of three and a half years. The student will spend the first year and a half of the master's program completing prerequisite course work prior to beginning clinical practicum and graduate course work.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Plan of Study

MHS candidates are required to complete a minimum of 42 semester hours in graduate-level courses with grades of B or higher. No fewer than 24 hours must be earned in 8000/9000-level course work offered by the program. A maximum of 10 hours in clinical practicum courses may be counted toward the 42-hour requirement.

Thesis Option

The student may choose the thesis option for the master's degree; work toward the thesis may count for up to six hours of credit.

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Examination

During the final semester of course work, we expect master's degree candidates to achieve a passing score on the Praxis Examination in Speech-Language Pathology. This exam serves as the comprehensive examination for the degree. See the program's online Graduate Student Handbook for additional information.

Doctorate in Communication Science and Disorders

Admission Contact Information

Judith Goodman, PhD (mucsd@missouri.edu)
303 Lewis Hall; Columbia, MO 65211
573-882-8407

Admission Criteria

- Deadline for Fall entrance: February 1
- Deadline for Summer entrance: February 1
- Minimum TOEFL score (if English is not first language): 600/250/100 (with 28 on speaking) (Paper/Computer/ Internet)
- Minimum GRE score: prefer at least 1100 on v+q (although not required)
- Minimum 3.4 GPA (A=4.0) for the last 60 hours of college/university course work

Acceptance for admission to doctoral studies is determined by a selection committee. Only those students who show clear likelihood for success in doctoral-level studies and research are admitted.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Communication Science and Disorders Program:

- Departmental Application
- 3 to 5 letters of recommendation
- A letter of intent
- A personal curriculum vitae
- GRE scores
- At least 1 example of the applicant's scholarly work (a thesis or

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substantial paper)
- Personal interviews may be requested

Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Plan of Study
Students who are admitted must pass a qualifying examination, complete a minimum of 60 credit hours beyond the master's degree (typically, 12 hours of research design and statistics; 30 hours of didactic course and seminar credit, including at least 12 hours in CSD and at least 12 outside the department; and research credit hours to bring the total to 60), pass written and oral comprehensive examinations and successfully complete and defend a dissertation.
Each individual student's doctoral studies program is designed in consultation with the student's major adviser and must be approved by a faculty advisory committee.

Courses

See COMMUNICATION SCIENCE DISORDERS (C S D) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Community Processes Graduate Certificate

Contact Information

231 Gentry Hall
573-882-6455

About the Certificate

The Graduate Certificate in Community Processes offers graduate students and professionals a unique opportunity to develop expertise in how spatial and relational communities function in today's society: their processes for forming, for maintaining the community and for achieving community objectives. A vital part of the certificate is acquiring applied skills in community facilitation processes or community analytical processes. Students must begin and complete the certificate in 3 years.

This certificate is offered jointly by the Departments of Agricultural Economics, Rural Sociology and the Harry S. Truman School of Public Affairs.

The Certificate is for:

- Graduate students seeking certification in addition to their degree program.
- Professionals with at least a bachelor's degree seeking a stand-alone graduate certificate for additional professional certification.

Plan of Study

- One required course
- Choose one of two tracks
  - One basic course from the list for that track
  - Remaining two courses from the list of basic and supporting courses of either track

Six credits may double-count toward your degree program.

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Community Facilitation track
Skills for working with groups and communities.

Required Course:
RS 7325: American Community Studies (campus and on-line)

Basic courses: (choose at least one)
RS 7341: Building Communities from the Grass Roots (1-week intensive)
PA 8610: Group Dynamics and Conflict Resolution (campus)
PA 8630: Organizational Change in a Community and Global Context (campus)

Supporting Courses:
RS 7342: Empowering Communities for the Future (1-week intensive)
RS 7343: Creating Capacity for Dynamic Communities (1-week intensive)
PA 8150: Foundations of New Governance (campus)
RS 9480: Community Survey Research (campus)

Analytical Processes for Communities track*
Analytical skills for decision-making, or working with communities or decision-makers.

Required Course:
RS 7325: American Community Studies (campus and on-line)

Basic courses: (choose at least one)
AE & PA 8350: Rural Economic Growth and Development (campus)
PA 8340: Regional Development Policy and Practice

Supporting Courses:
AE 9320: Regional Theory and Methods (campus)
AE 7310: Local Economic Analysis (on-line only, 1-credit)
PA 8150: Foundations of New Governance (campus)
PA 8320: Spatial Analysis for Public Affairs (campus)
RS 9480: Community Survey Research (campus)

*Students taking the Analytical Processes for Communities track must have statistical analysis through multiple regression and basic macro- and micro-economics.

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For More Information

For more information, contact Judith I. Stallmann, stallmannj@missouri.edu at (573) 882-6455, 231 Gentry Hall, Columbia, MO 65211

END OF CERTIFICATE DESCRIPTION.

Computer Science Graduate Programs

Contact Information:
Director of Graduate Studies
Department of Computer Science
201 Engineering Building West
University of Missouri
Columbia, MO 65211
http://www.cs.missouri.edu/
http://www.cs.missouri.edu/graduate/

About the Computer Science Program

The Department of Computer Science is a fast growing and research active entity at the University of Missouri. In fact, it is the hub of all campus computer science activities that involve well established research programs in computational biology and bioinformatics, cyber-security, distributed computing, geospatial information mining and retrieval, intelligent systems, multimedia communications, large dataset scientific visualization, networking, spoken language processing and human-machine interfaces, wireless sensor networks, etc. Additionally, members of the department lead the University's institutional efforts in developing infrastructure for bioinformatics, computational biology, and high-performance computing and networking. Our major research projects are heavily funded by both federal governments and industries. While National Science Foundation (NSF), National Institute of Health (NIH), National Geospatial-Intelligence Agency (NGA), Department of Energy (DoE), and Department of Defense (DoD) are examples for federal funding, Microsoft and Monsanto are representatives for industrial funding.

Degrees Offered

The Department of Computer Science offers the master of science in Computer Science, the doctor of philosophy in Computer Science, and the doctor of philosophy in Informatics graduate programs of study. The graduate degree programs prepare prior recipients of four-year BS degrees in computer science or closely related areas for further study at the doctoral level or for successful careers as specialized computer

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professionals. The PhD programs are a professional research degree designed to prepare students for advanced professional careers, including college teaching and research, as well as research and development in industrial, government, and nonprofit organization. Specialized training is available through close interaction with the faculty in their active research fields.

Research Facilities

Research facilities are well established around faculty members' expertise in bioinformatics and computational biology, biological and biomedical image analysis, distributed computing, intelligent systems, multimedia, networking, human-computer interaction, information management systems, and computer science foundations. These facilities are clustered in core laboratories for bioinformatics, multimedia and visualization, video processing, spoken-language processing, mobile networking and communications, wireless sensor networks, high-performance computing, cyber security, medical informatics and biological digital library.

In addition to online subscriptions to technical publications, the Ellis Library has over 3.2 million books, and the Engineering Library houses specialized collections in computer science. Students, faculty and staff members have access to a wide range of computing resources within the research laboratories and distributed throughout the campus including a large-scale cluster computing environment. The educational computing environment includes student laboratories for programming and Web access comprised of Windows, OS X, Linux, and UNIX systems.

Faculty Research Areas

The faculty members of the Department of Computer Science participate in the full spectrum of undergraduate and graduate education. Graduate education, in addition to direct involvement in projects funded by the federal government and industries, places equal emphasis on interdepartmental and cross-college research. The aim is to produce computer scientists who can function well in interdisciplinary research teams. Close integration of research with education is an invariant goal in the department's graduate programs. It emphasizes in-depth studies that can also be tailored to fit graduate students' individual interests.

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Bioinformatics and Computational Biology: Genomic and postgenomic data analysis, intelligent information systems for physicians, protein structure modeling and prediction, semantic interoperability of biological information and computations; structure-function relationships; deconvolution of complex phenotypes.

Distributed Computing and Networking: Wireless networking, sensor networks, multimedia communication, distributed systems, cybersecurity, Internet technology, e-learning.

Human-Computer Interaction and Intelligent Systems: Spoken-language processing, multimedia, visualization, graphics, information fusion, intelligent health-care systems, artificial intelligence.

Information and Data Management Systems: Information retrieval; digital library; database; data mining and knowledge recovery from geospatial, medical, and biological databases.

Theory: Algorithms and complexity, formal methods, programming language semantics.

Financial Aid

Teaching and research assistantships are available for qualified students in the graduate programs. The department also offers fellowships (including Shumaker Bioinformatics Fellowships and Gilliom Cyber-Security Fellowships) to a limited number of new PhD students. In addition, there are other fellowships and scholarships available at the university level.

Teaching assistantships and research assistantships are available with tuition waivers in the department. Requests for financial aid are examined at the same time as those for graduate admission, which are due before January 15 for fall semester and October 1 for winter semester.

Student Group

The department's graduate enrollment is about 100, with approximately half enrolled in the PhD programs. Advised by the director of graduate studies, the CS Graduate Student Council is an active body that works with the department and provides student input for the continuous improvement of the graduate programs in computer science.

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Computer Science Faculty

Dong Xu
chair, professor, PhD, University of Illinois at Urbana-Champaign.

Yi Shang
director of graduate studies, professor, PhD, University of Illinois at Urbana-Champaign.

Michael Jurczyk
director of undergraduate studies, associate professor, PhD, University of Stuttgart, Germany.

Yunxin Zhao
professor, PhD, University of Washington.

Xinhua Zhuang
professor, PhD, Peking University, China.

Toni Kazic
associate professor, PhD, University of Pennsylvania.

Kannappan Palaniappan
associate professor, PhD, University of Illinois at Urbana-Champaign.

Youssef G. Saab
associate professor, PhD, University of Illinois at Urbana-Champaign.

Chi-Ren Shyu
associate professor, PhD, Purdue University; director, MU Informatics Institute.

Gordon K. Springer
associate professor, PhD, Pennsylvania State University.

Jeffrey Uhlmann
associate professor, PhD, University of Oxford (UK).

Wenjun (Kevin) Zeng
associate professor, PhD, Princeton University.

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Jianlin Cheng
assistant professor, PhD, University of California, Irvine.

Ye Duan
associate professor, PhD, State University of New York at Stony Brook.

William L. Harrison
associate professor, PhD, University of Illinois at Urbana-Champaign.

Dmitry Korkin
assistant professor, PhD, University of New Brunswick, NB, Canada.

Dale Musser
assistant professor, PhD, The Ohio State University; director, Information Technology program.

Kwangsu Cho
adjunct professor, PhD, University of Pittsburgh.

Guilherme DeSouza
adjunct professor, PhD, Purdue University.

James M. Keller
adjunct professor, PhD, University of Missouri.

Satish Nair
adjunct professor, PhD, The Ohio State University.

Mihail Popescu
adjunct professor, PhD, University of Missouri.

Marjorie Skubic
adjunct professor, PhD, Texas A&M University.

Application Procedures

Application for admission to a graduate degree program in CS involves submitting a formal application through the Graduate School's online application for admission (http://gradschool.missouri.edu/prospective/prospective_apply.htm). An application must be accompanied by an application fee. In addition, the applicant must have the following

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original paperwork sent directly from the originating institutions to the Graduate School:

1. Official transcripts from ALL institutions attended
2. Official GRE score report from Educational Testing Service in New Jersey (and TOEFL scores for international applicants)

The following supplemental materials must be uploaded in the online application or mailed to the CS Department:

1. A personal goal statement indicating why you feel prepared to pursue the degree program and why you want to pursue this degree (uploaded in your online application)
2. Minimum course requirement form if you do not have a BS in computer science (uploaded in your online application)
3. Three letters of recommendation from professors who know your abilities that must address your ability and readiness to pursue a graduate program in computer science, (preferably submitted to your online application; alternatively mailed to Director of Graduate Studies, Computer Science Department, 201 Engineering Building West, University of Missouri, Columbia, MO 65211-2060, USA).

In order to be considered for admission in a particular semester, the director of graduate studies, according to the following deadlines must receive all required paperwork:

Fall admission: Applications and all paperwork must be received by March 1st. **NOTE:** If applying for financial assistance in the department, applications and all paperwork must be received by January 15th.

Spring admission: Applications and all paperwork must be received by October 1st. **Note:** Copies of the required papers (transcripts, GRE scores, etc.) cannot be accepted in lieu of the official reports from the originating institutions. Copies of these records can be submitted for evaluation, but any decision on admission is non-binding until the official records have been received.

All MU students (current or prior) must meet the same requirements as external students. The only difference is that MU grad students file one of the following forms (in lieu of an MU Application Form):

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a) *Current non-degree graduate students:* Change of Division, Degree, Program, Emphasis, or Advisor form;
b) *Current graduate students in another department:* Change of Division, Degree, Program, Emphasis, or Advisor form (same as *a*);
c) *Previous graduate students returning to same program:* Reactivation form.

These forms can be obtained from the department office or the Graduate School, 210 Jesse Hall.

Admission

Students applying to the CS graduate program must have a sufficient background in mathematics and computer science to be able to enroll in and perform satisfactorily in the CS courses numbered 7000 and above. Students applying for admission must fulfill the following minimum requirements that include material contained in specific CS courses or their equivalent taken at another institution. It is preferred that students have earned a BS degree in Computer Science. However, students from other disciplines meeting the minimum requirements will be considered for admission.

1. Proficiency in a procedural programming language equivalent to that gained by taking CS 1050 and 2050 (Algorithm Design & Programming I and II). The preferred programming language is Java. This material includes fundamental algorithm design and data structures.
2. Three semesters of formal course work in Calculus (Math 1500, 1700 and 2300 at MU).
3. Knowledge of statistics equivalent to that contained in Stat 4710 (Introduction to Mathematical Statistics).
4. Knowledge of discrete mathematical structures equivalent to that covered in Math 2320 (Discrete Mathematical Structures).
5. Knowledge of computer system architecture equivalent to that contained in CS 3270 (Introduction to Digital Logic) and CS 3280 (Assembly Languages and Computer Organization).
6. Four courses with grades B or better equivalent to those defined as follows:
   a. CS 4050 (Design and Analysis of Algorithms I)
   b. CS 4320 (Software Engineering) or 4330 (Object-Oriented Design)
   c. CS 4410 (Theory of Computation I), 4430 (Compilers I), or 4450 (Principles of Programming Languages)
   d. CS 4520 (Operating Systems I)

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7. A GPA of at least 3.0 (A=4.0) for the last half of the undergraduate curriculum.
8. Acceptable scores on the GRE General Test's three parts taken within the last five years. The minimum acceptable scores are 380 on the verbal (GRE-v) part, 740 on the quantitative part (GRE-q), and 4 on the analytical writing part.
9. For those not schooled in English as their native language, a score of TOEFL (taken within last two years) above 577 if paper-based or 90 if Internet-based.
10. For admission into the PhD program, the student must have either:
    a. Have a Bachelor's degree in Computer Science with a GPA of 3.4 (out of 4.); or
    b. Have an equivalent of a master's degree in Computer Science, or a closely related field, with a GPA of least 3.4 (out of 4.0).

Graduation Requirements

Students must complete the following requirements in order to earn the respective graduate degrees from the CS Department. The master of science degree program has both a thesis and a non-thesis option, which can be chosen by the student after consultation with their selected advisor.

MS Degree

All students completing a master's degree must fulfill the following minimum requirements:

1. The student must earn a minimum of 30 credit hours of course work approved by the CS Department. This course work must include at least 15 credit hours of course work numbered 8000 or above (CS 8990 Thesis Research credit is counted in the required 15 credit hours, but CS 8980 is not).
2. The overall GPA of course work taken as an enrolled graduate student must be at least 3.0 (out of 4.0).
3. Courses taken in other departments (up to 6 credit hours) will be considered for approval as part of a student's MS program and the approval is sought prior to the student undertaking the course work.
4. A 4000-level course listed in the minimum requirements for graduate admission, cannot be taken at the equivalent 7000 level as part of the required hours for the MS, ME, or PhD programs.
5. Non-Thesis Option:
   In order to complete the non-thesis option, the student must

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complete an independent project under a faculty advisor approved by the department. This project is carried out by enrolling in CS 8980 (Non-Thesis Research) for at least one hour of credit. This project is documented and presented to a faculty committee of at least three graduate faculty members and defended in a public defense as part of a final oral examination. The CS 8980 course grade is assigned by the student's faculty advisor upon the conclusion of the oral examination. This course is graded on an S/U basis and cannot be used to increase the student's overall GPA in graduate work. In this option, at most, 3 credit hours of Research, Reading, and/or Problem courses (such as CS 8980, 8990, 8085) can be counted toward the 30-hour MS graduate requirements.

6. Thesis Option:
   In order to complete the thesis option, the student must complete an independent project under a faculty advisor approved by the department. This project is carried out by enrolling in CS 8990 (Thesis Research) for at least three hours of credit. A maximum of six credit hours of CS 8990 can be counted toward the required 30 credit hours for the MS degree program. The thesis project is documented in a formal thesis, presented to a faculty committee of at least three graduate faculty members (one of whom is a faculty member from another department) and defended in a public defense as part of a final oral examination. The CS 8990 course grade(s) is/are assigned by the student's faculty advisor upon the conclusion of the oral examination. CS 8990 is graded on an S/U basis and cannot be used to increase the student's overall GPA in graduate work. In this option, at most 9 credit hours of Research, Reading, and/or Problem courses (such as CS 8980, 8990, 8085) can be counted toward the 30-hour MS graduate requirements.
7. Seminar Attendance: The approval of the M3 form is tied to the attendance records for the department's seminar series. MS students are required to satisfy the seminar attendance requirement in at least two semesters prior to graduation. Attendance at half of the approved CS seminars per semester meets this requirement.
8. M Forms: By the end of the second semester in the program, the M1 Plan of Study form should be prepared and submitted, with the aid of a faculty advisor in the department. An advisor should be selected during the student's first semester. If a thesis option is chosen, the student should form a thesis committee and submit the M2 Request for Thesis Committee form. The M3 Report of Master's Examining

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Committee form is submitted after the thesis or project defense during the final semester.

9. Annual Review Requirement of the Graduate School. All graduate students are required to complete the Annual Review Requirement by updating their information in the Graduate Student Progress System by the end of their second, fourth, etc. semesters of their program. The CS Department requires that this report be attached to each M form before being signed by the student's advisor and the CS director of graduate studies.

ME Degree

The requirements for the master of engineering degree are the same as those for the master of science (MS) in Computer Science with the following exceptions:

1. The student must complete at least 36 hours of graduate courses.
2. A minimum of 30 credit hours must be earned from University of Missouri System institutions.
3. At least 21 hours must be courses offered by the computer science department.
4. At least 15 hours must be 8000 level courses offered by the computer science department (excluding CS 8085).
5. CS 8980, CS 8990, and CS 9990 may not be taken.
6. At most 3 hours of CS 8085 may be taken.
7. No final examination is required.

The entrance requirements for the MS and ME degrees are the same.

PhD Degree

All students completing a PhD degree must fulfill the following minimum requirements:

1. Complete all of the course work requirements of the master's degree in CS or have an MS degree in CS from another institution. The student must have maintained an overall GPA of at least 3.4/4.0 in their prior graduate level course work (excluding research and problems courses).
2. Pass a qualifying examination to be admitted to candidacy in the CS PhD program.
3. Earn a minimum of 72 credit hours of course work and research past the student's BS degree.
4. Pass a comprehensive examination covering their areas of expertise.

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5. Complete a doctoral dissertation on a topic approved by the candidate's advisory committee.
6. Defend the dissertation in a final oral examination.
7. Have at least one journal paper submitted, accepted or published, as approved by the advisor.
8. Seminar Attendance: The approval of the D4 form is tied to the attendance records for the department's seminar series. PhD students are required to satisfy the seminar attendance requirement in at least four semesters prior to graduation. Attendance at half of the approved CS seminars per semester meets this requirement.
9. D Forms: By the end of the second semester in the program, ideally, the D1 Qualifying Exam Results & Doctoral Committee Approval and the D2 Plan of Study for the Doctoral Degree forms should be submitted to the Graduate School. The D3 form Doctoral Comprehensive Examination Results is submitted when the student has completed the Comprehensive Exam. The dissertation defense is followed by submission of the D4 Dissertation Defense form.
10. Annual Review Requirement of the Graduate School: All graduate students are required to complete the Annual Review Requirement by updating their information in the Graduate Student Progress System by the end of their second, fourth, etc. semesters of their program. The CS Department requires that this report be attached to each D form before being signed by the student's advisor and the CS Director of Graduate Studies.

*Students cannot take CS 9990 before passing the PhD qualifying exam.

Credit Toward a Second Master's Degree:
A student who has completed one Master's degree at MU or elsewhere may present, upon the recommendation of the student's advisor and approval by the Director of Graduate Studies and the Graduate School, a maximum of six hours of credit earned in the previous program toward a second Master's degree.

Courses

Please see Computer Science (CMP SC) in the MyZou online system.

END OF PROGRAM DESCRIPTION

Designated Minor in Law and Conflict Resolution for Journalism Doctoral Students

Contact Information

Professor Richard Reuben
MU School of Law School

About the Program

The Designated Minor would require doctoral students in the School of Journalism to take 15 hours of credit at the Law School. Six of those hours are for core courses in Conflict Theory (3) and Media Law (3). (Students may take similar courses at the Journalism School with the permission of the Journalism Dean for Graduate Studies.) Students also take 9 hours of electives by enrolling in courses that are regularly offered by the Law School. If the student wishes, he or she can specialize by focusing on one of three specific tracks: Civil Rights and International Law, Business Law, and General Law.

Career Opportunities

Journalism doctoral students typically go into teaching, and the Designated Minor would uniquely qualify them for teaching and research positions that emphasize the law and conflict, such as courses in the First Amendment, Media Law, and Law and the Courts. The Designated Minor thus would provide our graduates with a competitive advantage for competitive positions. The designated minor would only be available to students in the Journalism doctoral program.

Courses Available to Students in the Program

Journalism students in the program can select virtually any course in the Law School curriculum with the approval of the instructor. The program's core courses are offered annually, and many of the courses that qualify as electives for this program are taught on a regular basis, such as Constitutional Law, Basic Federal Income Tax, and Civil Procedure. There are some courses that are particularly popular with

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law students, such as Family Law and Mediation, that may be more difficult to get into because of enrollment caps, but Designated Minor students can still seek permission from the instructor to enroll.

Sample Program of Study

A student in the program would typically take one elective at the law school each semester they are in their Doctoral program until all 15 credits have been completed. Thus a student in the

Example Civil Rights and International Law track
Conflict Theory (3),
Mass Media Law (3),
Constitutional Law (4),
Freedom of Speech and Association (3), and
Civil Rights (3)

Example Business Law track
Conflict Theory (3),
Mass Media Law (3),
Business Organizations (4)
Securities Regulation (3), and
Employment Discrimination (3)

Example General Law track
Conflict Theory (3),
Mass Media Law (3)
Constitutional Law (4),
Criminal Procedure (3), and
Legislation (3)

Additional Course Prerequisites and Admissions Requirements

There are no prerequisites or admission requirements for this program. Students in the program are required to notify the Law School's registrar, Denise Boessen, of their participation in the program.

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Advising and Support Services

Professor Richard Reuben of the Law School is the primary advisor for the program. Others with whom students may discuss the program include Assistant Dean Robert Bailey of the Law School, and Professor Michael Grinfeld and academic advisor Amy Lenk of the Journalism School. To facilitate advising, we have created tracks within the program for Civil Rights and International Law, Business Law, and General Law, and have listed more than 20 courses for each track that a student can consider taking.

END OF PROGRAM DESCRIPTION.

Diagnostic Medical Ultrasound (MHS) Graduate Program

Contact Information

School of Health Professions- DMU Program
409 Lewis Hall
573-884-2994
Diagnostic Medical Ultrasound Web Site:
http://www.umshp.org/dmu/

About Diagnostic Medical Ultrasound

The Master of Health Science in Diagnostic Medical Ultrasound is offered by the School of Health Professions, Department of Cardiopulmonary and Diagnostic Sciences. The Diagnostic Medical Ultrasound Program (DMU) is a 35-40 hours per week, 52 weeks per academic year clinical education program.

Future Certification and Careers

Upon successfully completing the requirements of the DMU Program, MHS Graduates will be eligible to apply to the American Registry of Diagnostic Medical Sonographers (ARDMS) for registry in Abdomen, Obstetrics and Gynecology, Vascular Technology and Cardiac Ultrasound.

Financial Aid

Please contact the financial aid office. Some programs require an application and extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Diagnostic Medical Ultrasound Faculty

Moses Hdeib, MD, PhD, RDMS, RDCS, RVT.
program director, director of graduate studies.

Ecaterina Mariana Hdeib, MA, RDMS.
clinical assistant professor.

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Douglas Clem, MM, MHS, RDCS, RVT.
clinical assistant professor / clinical coordinator.

Sharlette Anderson, MHS, RDMS, RVT, RDCS.
clinical coordinator / instructor.

Master of Health Science Degree in Diagnostic Medical Ultrasound

Admission Contact Information

Dr. Moses Hdeib
hdeibm@health.missouri.edu
409 Lewis Hall
Columbia, MO 65211
573-884-2994

Admission Criteria

Deadline for Spring entrance: December 1

- Minimum TOEFL score: 550 (Paper); 55 on each subtest of the TOEFL, 55 on the Test of Spoken English (TSE-A), and a 4.5 on the Test of Written English (TWE)
- Minimum GRE score: not set
- Undergraduate GPA minimum: 3.00 (A=4.0) for the last 60 hours of college work

Potential applicants who have all the prerequisites for admission to the program should submit their application early (before November) in the fall of the academic year in order to be considered for early acceptance with start in the following spring semester. Please contact the Director of Graduate Studies.

Required Application Materials

To the Graduate School:

- All required Graduate School documents
- GRE scores

To the Diagnostic Medical Ultrasound Program:

- Departmental application
- Transcripts

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Degree Requirements
Graduate students must maintain a 3.0 grade point average in all courses required for the degree. Failure to achieve a semester cumulative grade point average of 3.0 in required courses will result in delay of graduation or dismissal from the program. Students are expected to maintain full-time enrollment in the sequenced curriculum and complete the degree requirements as outlined in the course of study.

For More Information
For information about the Master of Health Science Degree in Ultrasound, contact Director of Graduate Studies Dr. Moses Hdeib, hdeibm@health.missouri.edu.

Moses Hdeib, MD, PhD, RDMS, RDCS, RVT
Diagnostic Medical Ultrasound
409 Lewis Hall
Columbia, MO 65211
573-884-2994
or send an e-mail to Dr. Hdeib: hdeibm@health.missouri.edu

Courses

See Diagnostic Medical Ultrasound (DMU) Courses in the MyZou online system.

END OF PROGRAM DESCRIPTION.

Dispute Resolution Master of Laws (LLM) Degree

Contact Information
Center for the Study of Dispute Resolution
206 Hulston Hall
573-882-2020
Email: mulawcdr@missouri.edu
Web: http://law.missouri.edu/csdr/llm

About the Dispute Resolution (LLM) Program

Students in the Master of Laws (LLM) dispute resolution program have a unique opportunity to gain a deeper understanding of theoretical, policy, design and ethical issues in dispute resolution. They study with leading dispute resolution scholars who generate important academic work influencing dispute resolution theory and practice around the world. Small class sizes create a close community with faculty and students.

Our program blends theoretical analysis, practitioner skills, and systems design work in courses usually limited to LLM students. Our diverse student body — by age, race, nationality, legal background — enriches the level of discussion, inside and outside the classroom.

The LLM meets the needs of those with backgrounds as advocates, neutrals, law-trained court administrators and government agency personnel, among others. Although the program is geared primarily to lawyers, we will accept applicants who have bachelor's degrees and substantial ADR experience but who do not have law degrees.

Graduate Degrees Offered

- Master of Laws in Dispute Resolution
- LLM students can earn dual degrees (MA and PhD) from the School of Journalism.

The program also is affiliated with MU's Center for the Study of Organizational Change and Truman School of Public Affairs, with an

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opportunity to pursue a certificate in Public Affairs in conjunction with the LLM.

The MU School of Law offers a juris doctor (JD) program, which has its own admission process.

Dispute Resolution Faculty

John Lande
director of the LL.M. Program in Dispute Resolution, Isidor Loeb Professor, JD, Hastings College of Law, PhD, University of Wisconsin-Madison.

Robert G. Bailey
director of the Center for the Study of Dispute Resolution and assistant dean, JD, University of Missouri.

Rafael Gely
associate dean for academic affairs, James E. Campbell Missouri Endowed Professor, senior fellow at the Center for the Study of Dispute Resolution, JD, PhD, University of Illinois.

Ilhyung Lee
Edward H. Hinton Professor, senior fellow at the Center for the Study of Dispute Resolution, JD, Boston College.

Richard C. Reuben
James Lewis Parks Professor, senior fellow at the Center for the Study of Dispute Resolution, JD, Georgia State University, JSD, Stanford University.

Rodney J. Uphoff
Elwood L. Thomas Missouri Endowed Professor, senior fellow at the Center for the Study of Dispute Resolution, director of the University of Missouri South Africa Educational Program, JD, University of Wisconsin.

James Westbrook
Earl F. Nelson and James S. Rollins Professor Emeritus, JD, Duke University, LLM, Georgetown University.

S.I. Strong
associate professor, senior fellow at the Center for the Study of Dispute Resolution, JD, Duke University, PhD, University of Cambridge.

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James Levin
associate director of the Center for the Study of Dispute Resolution, adjunct assistant clinical professor, JD, Northeastern University.

Carli N. Conklin
visiting associate professor, JD, University of Virginia.

Rachel Heald
legal writing associate professor, JD, Georgetown University.

Dispute Resolution Courses

Following are the required core courses for the LLM together with some recommended electives relevant to the dispute resolution field. Students choose electives from the law school and other MU departments according to their interests and statement of purpose for enrolling in the program.

Required Core Courses (12-13 credits):

- LLM Arbitration Seminar (3)
- LLM Major Research Project (3)
- Methods for Dispute Resolution Program Evaluation and Design (3)
- Non-Binding Methods of Dispute Resolution (3-4)

Recommended Electives:

- Conflict and Conflict Management (3)
- Cross-Cultural Dispute Resolution (3)
- Group Dynamics and Conflict Resolution (3)*
- LLM Externship (1-6)
- LLM Independent Study (1-3)
- Mediation Clinic (1)
- Organizational Analysis and Change (3)*
- Organizational Dynamics and Leadership (3)*
- Practicum on Dispute Resolution Training and Education (1-2)
- Public Policy Dispute Resolution (3)

**Courses offered by MU's Truman School of Public Affairs.*

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Master of Laws in Dispute Resolution

Admission Contact Information

Karen Neylon (neylonk@missouri.edu)
206 Hulston Hall; Columbia, MO 65211
573-882-2020

Admission Criteria

- Applications are reviewed on a rolling basis as space is available.
- Minimum TOEFL score: 600/100 (paper/internet)
- Minimum GPA: 2.5 in JD program; 3.0 for graduate or advanced degree programs
- JD or its foreign equivalent; in exceptional cases, applicants may be admitted without a law degree if they have substantial experience with dispute resolution.
- Significant legal experience preferred

Required Application Materials

- All required Graduate School documents
- Professional résumé (upload through online application or mail directly to program)
- Statement of purpose (upload through online application or mail directly to program)
- 2 letters of recommendation [use the form provided (PDF) through our site]
- Financial support application form (if applicable)

Please visit http://law.missouri.edu/csdr/llm/admissions.html for application instructions.

Financial Aid from the Program

The LLM Program offers limited departmental financial support – the Rankin M. Gibson LLM Scholarship and the LLM Fellowship. The program does not offer graduate teaching or graduate research assistantships. The application form (PDF) for the department funding explains the two different awards and provides instructions on how to apply.

Degree Requirements

The LLM program requires 24 credit hours of study. 12-13 credits are required courses in the law school and 11-12 credits are electives. Six of the elective credits can be taken in other MU departments (see the list of

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courses). To graduate, a student must have completed all graduate work attempted at MU with a grade point average of 3.0 (A=4.0) or better.

With full-time study, students should complete degree requirements within 1 academic year of matriculation. Part-time students in a continuous course of study could probably complete the program within 2 academic years. All degree requirements must be completed within a period of 3 years beginning with the first semester of enrollment in the program.

More Information
Application materials and additional information about the program are available on the LLM Web site. Students also can write or call the LLM Program Coordinator, Center for the Study of Dispute Resolution, 206 Hulston Hall, Columbia, MO 65211, 573-882-2020.

LLM Courses

See LAW (LAW) in the myZou online system.

END OF PROGRAM DESCRIPTION

Economics Graduate Programs

Contact Information

College of Arts and Science
118 Professional Building
573-882-0063
573-882-2697 (fax)
http://economics.missouri.edu/

About the Program

The Department of Economics offers graduate work leading to the master of arts and the doctor of philosophy degrees. The program prepares students for careers in government and private enterprises, colleges, universities and research institutions through training in the techniques and applications of economic analysis, interpretation of data and the formulation and appraisal of public policy. Admission may be granted at any time to qualified students.

Degrees Offered

- MA and PhD in economics
- Cooperative Dual Degrees: MA in applied mathematics and economics, MA in economics and statistics

Specializations

The department offers fields of specialization in many traditional fields in economics with particular strength in monetary and financial economics, international trade and finance, economic development and labor and demographic economics.

Dual Degrees

The Departments of Mathematics and Economics offer selected students the option of obtaining dual degrees: an MS degree in applied mathematics and an MA degree in economics. The Departments of Economics and Statistics offer selected students the option of obtaining dual degrees: an MS degree in statistics and an MA degree in economics within an integrated program. Whereas obtaining separate master's degrees would nominally require a minimum of 60 credit hours of course work, students enrolled in the dual master's degree program

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may obtain degrees based on 48 credit hours of course work. Students may be able to complete degree requirements within 2½ years.

Financial Support
Student financial support is available to graduate students as teaching and research assistantships, allocated based on promise and performance in the program. In addition, direct fellowship support may also be available to selected candidates. Tuition is waived for students who receive assistantship or fellowship support. January 1 is the deadline for applications for assistantships for the school year beginning in August, but earlier submissions are desirable. Late applications will be accepted subject to the availability of openings and funds.

More Information
For specific information and/or application forms, please write the Graduate Secretary, 118 Professional Building, Columbia, MO 65211, or send an e-mail or visit our Web site.

Economics Faculty

David M. Mandy
chair, professor, PhD, University of Illinois at Urbana-Champaign. Econometrics, microeconomic theory and industrial organization.

Xinghe Wang
director of graduate studies, professor, PhD, University of Iowa. Mathematical economics.

Ronald M. Harstad
J. Rhoads Foster Professor in the Economics of Regulated Industries, PhD, University of Pennsylvania. Game theory, auctions, laboratory economics, value elicitations.

Joseph H. Haslag
executive director, Economic & Policy Analysis Research Center, professor, Kenneth Lay Chair in Economics, PhD, Southern Methodist University, Monetary theory.

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Jeffrey D. Milyo
professor, PhD, Stanford University. Applied microeconomics, health, law, political economics, public economics.

Peter R. Mueser
professor, PhD, University of Chicago. Labor economics.

Shawn X. Ni
professor, PhD, University of Minnesota. Macroeconomic theory.

Michael Podgursky
professor, PhD, University of Wisconsin-Madison. Labor economics and economics of education.

Saku Aura
associate professor, PhD, Massachusetts Institute of Technology. Public economics, household decision making.

Emek Basker
associate professor, PhD, Massachusetts Institute of Technology. Industrial organization.

Douglas Miller
associate professor, PhD, University of California, Berkeley. Econometrics.

Neil A. Raymon
associate professor, PhD, University of Colorado-Boulder. Macroeconomic theory.

Vitor Trindade
associate professor, PhD, University of California, San Diego. International economics and development economics.

Chao Gu
assistant professor, PhD, Cornell University. Macroeconomics and Monetary Economics, Banking, Economic Theory.

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Cory Koedel
assistant professor, PhD, University of California, San Diego. Labor Economics, Economics of Education, Public Economics, Applied Microeconomics.

Oksana Loginova
assistant professor, PhD, Duke University. Microeconomic theory and industrial organization.

J. Isaac Miller
assistant professor, PhD, Rice University. Theoretical and applied time series, financial econometrics, energy economics.

Gunjan Sharma
assistant professor, PhD, University of Maryland. International trade.

Richard L. Wallace
chancellor and professor emeritus, PhD, Vanderbilt University. Public utility regulation and health economics.

W. Whitney Hicks
professor emeritus, PhD, Stanford University. Economic development.

Maw Lin Lee
professor emeritus, PhD, University of Wisconsin. Applied econometrics.

Carmen F. Menezes
professor emeritus, PhD, Northwestern University. Microeconomic theory.

Charles G. Geiss
associate professor emeritus, PhD, University of North Carolina. Mathematical economics.

Donald J. Schilling
associate professor emeritus, PhD, University of North Carolina. International finance.

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Master of Arts in Economics

Admission Contact Information

Lynne Riddell riddell@missouri.edu
118 Professional Bldg.; Columbia, MO 65211
573-884-7989

Admission Criteria

Fall deadline: January 1
Spring deadline: October 1

- Minimum TOEFL score: 550/79 (paper/internet); IELTS: 6.0 Academic
- Minimum GRE score: Q=700 V=400
- Bachelor's degree in any field

Students with a bachelor's degree in any field may apply for admission into the master's program. Applicants are admitted on the basis of an undergraduate record, with particular emphasis on performance in economics, mathematics, and statistics courses, performance on the GRE, and letters of recommendation. Although the graduate program assumes mathematical background through calculus (normally two or three semesters of college calculus), as well as undergraduate economics training, applicants with more limited backgrounds may be accepted into the program. Such individuals will be assigned supporting course work, some or all of which may be counted toward fulfilling requirements.

Required Application Materials

To the Graduate School:

- All required Graduate School documents
- Résumé (uploaded through the online application or mailed directly to the department)
- Personal statement (uploaded through the online application or mailed directly to the department)

To the Economics Program:

- 3 letters of recommendation (use the form provided)
- Official GRE scores
- International students: copy of official TOEFL or IELTS scores

Financial Aid from the Program

Some programs require an extra form or statement from those who

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wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Degree Requirements
To fulfill requirements for the MA degree, a candidate must complete a 30-hour approved program of study. This includes 15 credit hours of core courses: Econ 7370 (mathematical economics), Econ 8451 (microeconomics), Econ 8453 (macroeconomics), Econ 8472 (econometric methods), and Econ 8473 (applied econometrics). In addition, students must take Stat 7710 (introduction to mathematical statistics) and Econ 8413 (MA research workshop). Note that Econ 9451 may be substituted for Econ 8451, Econ 9453 may be substituted for Econ 8453, Econ 9473 may be substituted for Econ 8472, and enrollment in 9000-level courses may require consent of the department and/or the instructor.

PhD Track
Students can also earn an MA while working toward a PhD by passing the comprehensive examination.

Doctorate in Economics

Admission Contact Information
Lynne Riddell riddell@missouri.edu
118 Professional Bldg.; Columbia, MO 65211
573-884-7989

Admission Criteria
Fall deadline: January 1
Spring deadline: October 1
Summer deadline: January 1

- Minimum TOEFL score: 550/79 (paper/internet); IELTS: 6.0 Academic
- Minimum GRE score: Q=700 V=400

Ordinarily, to be accepted for advisement in the PhD program, a student must have a master's degree in economics, or, alternatively, the student must meet the requirements for admission to the MA program, together with the requirement of an adequate background in economics, mathematics and statistics.

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Required Application Materials

To the Graduate School:

- All required Graduate School documents
- Résumé (uploaded through the online application or mailed directly to the department)
- Personal statement (uploaded through the online application or mailed directly to the department)

To the Economics Program (go there for details):

- 3 letters of recommendation (use the form provided)
- Official GRE scores
- International students: copy of official TOEFL or IELTS scores

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Degree Requirements

The PhD is granted to those who have gained a comprehensive knowledge and understanding of theoretical and applied economics. Only those who show promise of superior attainment are admitted to candidacy. The minimum requirements for admission into the Ph.D. program are: undergraduate GPA 3.0, GRE quantitative 700, GRE verbal plus quantitative 1100, TOEFL 550 (foreign applicants only). In addition, only applicants with an adequate background in economics, mathematics and statistics are admitted.

Prerequisites for the PhD program include courses in Intermediate microeconomic, Intermediate macroeconomics, Quantitative or mathematical economics, Statistics, Econometrics or regression and correlation analysis, and calculus. Departmental acceptance of the student as a PhD candidate is based upon satisfactory performance on a qualifying examination process that is part of the first year of course work.

The PhD program is designed to encompass training in economic theory and quantitative methods, as well as flexibility for students in choosing course work to suit their interests and intended careers.

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Students Entering with Only a Bachelor's Degree
For those entering the program with a bachelor's degree, the following courses are required:

- Stat 7710 (mathematical statistics);
- Econ 7370 (mathematical economics);
- Econ 8451, Econ 9451 and Econ 9452 (microeconomics);
- Econ 8453, Econ 9453 and Econ 9454 (macroeconomics);
- Econ 8472, Econ 9473 and Econ 9474 (econometric methods);
- 6 credit hours of Econ 9413 (PhD research workshop);
- 6 credit hours of 9000-level economics courses in each of two areas of specialization;
- Two other 9000-level economics courses (excluding 9090 and 9480);
- 3 additional credit hours of elective course work within the Department, or approved courses in related areas outside economics; and 12 credit hours of dissertation research (for a total of 72 credit hours).

Courses taken to satisfy these requirements (except dissertation research) may be taken while earning an MA at MU, or, as with students entering the program with prior graduate coursework, at other accredited colleges and universities as recommended by the Graduate Studies Committee.

Examinations
Qualifying Examination: Students pursuing the Ph.D. degree must pass a qualifying examination. Upon completion of relevant required courses in the first year, students take the qualifying examination,* which is a written examination that covers microeconomic concepts, calculus, matrix algebra, optimization, statistics and econometrics. The exam is 6 hours in length, usually administered in parts over two days. The exam must be taken in May following the first year of graduate study and is graded in three levels: 0, 1, and 2. Students who receive a score of 2 pass the exam. Students who receive a score of 1 may retake the exam the following August. Students who receive a score of 0 fail and may not continue in the Ph.D. program. Only pass and fail grades will be awarded on the August exam. Students who fail the exam may continue in the MA program.

Comprehensive Examination: Students pursuing the Ph.D. degree must pass a comprehensive examination. The comprehensive exam has

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a written section and an oral section. Upon completion of required courses in the second year, students take the written portion of the comprehensive examination, which covers all second-year courses (Microeconomics, Macroeconomics, and Econometrics). The exam is 6 hours in length; it is administered in parts, with two-hours devoted to each of the three core subjects. The first offering of the exam is in May. Students who fail to pass all three parts of the exam the first time may retake the failed part(s) the following August. Students who fail the written exam may continue in the MA program. The oral portion of the comprehensive exam is administered by the student's dissertation committee as part of the dissertation proposal defense. At the discretion of the student's dissertation committee, written questions over the fields relevant to the proposal may be included as part of the proposal defense.

*Applicants with outstanding background may be selected by the Graduate Studies Committee to be offered the opportunity to take the August qualifying exam prior to the start of their first semester. Such students who pass the August qualifying exam will move directly to second year courses. Students who fail will start with the normal first year courses.

Specialization

Fields: Students are required to complete a course of study in two defined areas of specialization. It is expected that one of the areas will be related to the objectives of the student's dissertation. The exact areas of specialization from which the student can choose are listed below. Each course of study consists of two classes in the area followed by a research paper. Students are required to receive a passing grade in each course along with a passing grade on the research paper. The instructors of the field courses oversee the content of the research paper and the instructor of the Ph.D. research workshop (9413) oversees the mechanics of the paper. A field requirement is satisfied after both field course instructors and the 9413 instructor sign off on the paper. Students are not allowed to combine courses from separate fields. The department commits itself to offering a second course in any field to all students who have completed an initial course in the field, within two semesters of the student completing the initial course (not counting the summer semester). This course may consist of a readings course with one of the faculty members in the field in lieu of a regular course. If

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a readings course is provided, then the faculty member is required to provide the department with the reading list for the course.

List of fields and courses:
Econometrics – Economics 9476 and 9477
Industrial Organization – Economics 9455 and 9456 or 9471
International Economics – Any two of Economics 9425, 9426, 9427, or 9460
Labor Economics – Economics 9411 and 9412
Monetary Economics – Economics 9430 and 9431
Public Economics – Economics 9415 and 9416
Public Policy – Public/International – Economics 9415 or 9416 and Economics 9425, 9426, 9427, or 9460
Quantitative Microeconomic Policy Analysis – Economics 9446 and 9447

Dissertation
The dissertation must make a substantial contribution to knowledge. Upon completion of the dissertation, students pursuing the PhD degree must pass a final oral examination. This exam can include an evaluation of the dissertation, the student's defense of the dissertation, and the student's general comprehension of economics, and is open to the academic community.

Statement on Satisfactory Progress
1. Taking and completing required course work on schedule and maintaining a GPA of at least 3.0.
2. Enrollment in a full-time plan of study, i.e., completion of at least 9 graded hours per semester.
3. Taking and passing qualifying and comprehensive examinations on schedule.
4. Students who have completed all course work and are working on the final stage of the PhD program are encouraged to present their written proposal within a reasonable amount of time.

Courses

See Economics (ECONOM) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Educational Leadership & Policy Analysis Graduate Programs

Contact Information

College of Education
202 Hill Hall
573-882-8221
573-884-5714 (fax)
Educational Leadership & Policy Analysis Web site:
http://education.missouri.edu/ELPA/index.php

About ELPA's Graduate Programs

The graduate programs in the Department of Educational Leadership and Policy Analysis are designed to meet the specific educational needs of the student in a particular area of emphasis. Graduates find employment in a wide range of settings including colleges and universities, public schools, policy agencies, professional associations, government and business and industry.

The PhD Program in ELPA requires a minimum of 60 hours beyond the master's degree. The goal of the PhD program is the preparation of professional researchers, scholars, or scholar practitioners who have high levels of competence in conducting research that adds to the knowledge base.

The program also has a goal of meeting the student's individual career goals and interests through the development of an appropriate plan of study. Each emphasis area has slightly different requirements and areas of focus; however, all 3 emphasis areas require a major or content area core; electives; a support area; a research core; and the completion of a minimum of 6 hours for the dissertation.

The Statewide Cooperative EdD Program in Educational Leadership is designed to enhance the knowledge and competencies of educational leaders so they provide optimal leadership in organizations that educate a wide range of learners from youth to adult. The program's curriculum is designed to prepare leaders who are inquiring, reflective practitioners

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who are competent in defining and solving complex problems in education.

The Educational Specialist (EdSp) Program is designed to enhance the knowledge and competencies of K-12 educational administrators and to lead to advanced principal certification and/or superintendent certification. The program has a thematic, integrated, problem-based curriculum intended to prepare school and district leaders who are inquiring, reflective practitioners. The curriculum is aligned with state standards for certification.

The department's **master's programs** are intended to provide initial preparation for leaders in a variety of educational contexts, including higher and continuing education and PK-12 schools. Programs vary according to emphasis area and are designed to meet student's individual career goals and interests — e.g., student affairs administration, initial principal certification and general higher education administration.

A minimum of 33 credit hours is required for the M Ed.

Satisfactory Rate of Progress

All ELPA students are expected to make satisfactory progress toward their degrees. Satisfactory progress of students will be determined through an annual review by the director of graduate studies, graduate students' academic advisers and their committees. Judgments about satisfactory progress will involve consideration of the following:

- Graduate School time limits for programs
- GPA for departmental courses
- Continuous enrollment and active engagement in course work or research (EdD and PhD)
- Student performance in research credits
- Timely resolution of incomplete grades

Degrees available in the following emphasis areas:

- MA, M Ed in Higher and Continuing Education
- M Ed in Learning and Instruction (concentration in Educational Leadership)
- EdSp in Educational Administration
- EdD in Educational Leadership

continued on next page

- PhD in Educational Administration
- PhD in Educational Policy Studies
- PhD in Higher and Continuing Education

Graduate Certificates
- Education Policy Studies
- Higher and Continuing Education Administration

Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Educational Leadership and Policy Analysis Faculty

Jay Scribner
chair, professor, PhD, University of Wisconsin-Madison. Leadership, professional learning, evaluation.

Joe F. Donaldson
director of graduate studies, professor, PhD, University of Wisconsin-Madison. Adult and continuing education.

Steven W. Graham
professor, PhD, University of Iowa. Higher education, continuing education.

Motoko Akiba
associate professor, PhD, Pennsylvania State University. School violence, comparative and multicultural education, policy analysis.

Jeff Brooks
associate professor, PhD, University of Missouri. Social and cultural dynamics of educational leadership; distributed and teacher leadership; ethics and social justice.

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Jeni Hart
associate professor, PhD, University of Arizona. The professions, organizational transformation and gender issues within academe.

Peggy Placier
associate professor, PhD, University of Arizona. Policy, sociology and history of education; teacher education.

Juanita Simmons
associate professor, PhD, University of Texas-Austin. Curriculum design, urban leadership, magnet school operations and staff development.

Rozana Carducci
assistant professor, PhD, University of California – Los Angeles. Postsecondary leadership, academic capitalism, student affairs, qualitative methodology.

Bradley Curs
assistant professor, PhD, University of Oregon. Economics.

Sarah Diem
assistant professor, PhD, University of Texas – Austin. Social and cultural context of educational policy, school desegregation, poverty and educational policy.

Casandra Harper
assistant professor, PhD, University of California–Los Angeles. College students, multiracial identity.

Noelle Witherspoon-Arnold
assistant professor, PhD, University of Alabama. Auto/biographical research methods, womanist theory, religion and spirituality in education, ethics in education.

Carol Maher
assistant professor of professional practice, PhD, University of Missouri. Leadership, school culture, and adult learning

Paul L. Pitchford
associate director, Hook Center, PhD, University of Missouri.

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Adjunct Faculty

Julie Middleton
adjunct associate professor, PhD, University of Missouri.

Von Pittman
adjunct associate professor, PhD, University of Georgia.

Terry Barnes
adjunct assistant professor, PhD, Southern Illinois University.

Monica Beglau
adjunct assistant professor, EdD, University of Wyoming.

Ann Behrens
adjunct assistant professor, EdD, University of Missouri.

Christopher Belcher
adjunct assistant professor, EdD, University of Missouri.

John Comerford
adjunct assistant professor, PhD, University of Kansas-Lawrence.

Pam Conway
adjunct assistant professor, EdD, University of Missouri.

Patty Corum
adjunct assistant professor, PhD, University of Missouri.

Cheryl Cozette
adjunct assistant professor, EdD, University of Missouri.

Vicki Curby
adjunct assistant professor, PhD, University of Missouri.

Karl Blake Danuser
adjunct assistant professor, PhD, University of Missouri.

Mark Ehlert
adjunct assistant professor, PhD, University of Missouri.

continued on next page

Mardy Eimers
adjunct assistant professor, PhD, Syracuse University.

Jill Hermsen
adjunct assistant professor, PhD, University of Missouri.

Kimberly Hoffman
adjunct assistant professor, PhD, University of Missouri.

Ann Korschgen
adjunct assistant professor, PhD, University of Wisconsin-Madison.

Dan Lowry
adjunct assistant professor, EdD, University of Missouri.

Kim Presko
adjunct assistant professor, PhD, University of Missouri.

Cathy Scroggs
adjunct assistant professor, PhD, University of Missouri.

Robert Stein
adjunct assistant professor, PhD, Vanderbilt University.

Faculty Emeriti

Richard L. Andrews
professor emeritus, PhD, Purdue University.

Dan Cockrell
clinical associate professor emeritus, EdD, Oklahoma State University.

Karen Cockrell
associate professor emeritus, EdD, Oklahoma State University.

Irv Cockriel
professor emeritus, PhD, University of Missouri.

Jerry W. Valentine
professor emeritus, PhD, University of Nebraska.

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Doctorate of Philosophy (PhD) Program in ELPA

Admission Contact Information

Educational Leadership & Policy Analysis
College of Education
202 Hill Hall
573-882-8221
573-884-5714 (fax)
ELPA Web site: http://education.missouri.edu/ELPA/index.php

Admission Criteria

- Fall deadline – February 15th
- Spring deadline – October 15th
- Minimum TOEFL score: 500 (paper) or 61 (internet)
- Minimum IELTS score: 5.5
- Minimum GRE score: N/A
- Minimum GPA: 3.0 (A=4.0)

Admissions screening and decisions for all graduate programs are not made until all required materials have been submitted. Admissions recommendations are based on a profile developed from data that include undergraduate (last 60 hours) and graduate grade point averages, scores on the Graduate Record Examinations (GRE), recommendations, evidence of successful professional experiences and samples of scholarly writing.

Required Application Materials to the Graduate School:

- All required Graduate School documents

Required Application Materials to the Program:

- Official copies of transcripts
- Official GRE scores
- Official TOEFL or IELTS scores (international applicants only)
- 3 recommendation forms, two of which are from faculty who have taught/advised the applicant
- Departmental application
- Current résumé
- Samples of scholarly writing
- Assistantship application, if interested

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Doctorate of Education (EdD) in Educational Leadership (Statewide Cooperative EdD)

The Statewide Cooperative EdD Program in Educational Leadership requires a minimum of 76 credit hours beyond the baccalaureate degree. The program, offered in a cohort format, includes 34 hours of course work in 6 contiguous semesters, beginning in the summer and concluding in the spring semester 2 years later. In addition to course work credit, 12 credit hours of dissertation research are required.

Admission Contact Information

Educational Leadership & Policy Analysis
College of Education
202 Hill Hall
573-882-8221
573-884-5714 (fax)
ELPA Web site: http://education.missouri.edu/ELPA/index.php

Admission Criteria

- December 1st of even-numbered years
- Minimum TOEFL score: 500/173 (paper/computer)
- Minimum IELTS score: 5.5
- Minimum GRE score: N/A
- Minimum GPA: 3.0 (A=4.0)

Admissions screening and decisions for all graduate programs are not made until all required materials have been submitted. Admissions recommendations are based on a profile developed from data that include undergraduate (last 60 hours) and graduate grade point averages, scores on the Graduate Record Examinations (GRE), recommendations and evidence of successful professional experiences.

Required Application Materials to the Graduate School:

- All required Graduate School documents

Required Application Materials to the Program:

- Official copies of transcripts
- Official GRE scores
- Official TOEFL or IELTS scores (international applicants only)

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- 3 recommendation forms, two of which are from faculty who have taught/advised the applicant.
- Departmental application
- Current résumé
- Assistantship application, if interested

Educational Specialist Program in ELPA

Admission Contact Information

Educational Leadership & Policy Analysis
College of Education
202 Hill Hall
573-882-8221
573-884-5714 (fax)
ELPA Web site: http://education.missouri.edu/ELPA/index.php

Admission Criteria

- No deadline
- Minimum TOEFL score: 500 (paper) or 61 (internet)
- Minimum IELTS score: 5.5
- Minimum GRE score: N/A
- Minimum GPA: 3.0 (A=4.0)

Admissions screening and decisions for all graduate programs are not made until all required materials have been submitted. Admissions recommendations are based on a profile developed from data that include undergraduate (last 60 hours) and graduate grade point averages, scores on the Graduate Record Examinations (GRE), recommendations and evidence of successful professional experiences.

Required Application Materials to the Graduate School:

- All required Graduate School documents

Required Application Materials to the Program:

- Official copies of transcripts
- Official GRE scores
- Official TOEFL or IELTS scores (international applicants only)
- 3 recommendation forms
- Departmental application
- Current résumé
- Assistantship application, if interested

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Master's Programs in ELPA

Admission Contact Information

College of Education
202 Hill Hall
573-882-8221
573-884-5714 (fax)
ELPA Web site: http://education.missouri.edu/ELPA/index.php

Admission Criteria

M Ed in Learning and Instruction (concentration in Educational Leadership):

- No deadline

M Ed in Higher and Continuing Education:

- Fall deadline – February 15th
- Spring deadline – October 15th

- Minimum TOEFL score: 500 (paper) or 61 (internet)
- Minimum IELTS score: 5.5
- Minimum GPA: 3.0 (A=4.0)

Admissions screening and decisions for all graduate programs are not made until all required materials have been submitted. Admissions recommendations are based on a profile developed from data that include undergraduate (last 60 hours) and graduate grade point averages, recommendations and evidence of successful professional experiences.

Required Application Materials to the Graduate School:

- All required Graduate School documents

Required Application Materials to the Program:

- Official copies of transcripts
- Official TOEFL or IELTS scores (international applicants only)
- 3 recommendation forms
- Departmental application
- Current résumé
- Assistantship application, if interested

A minimum of 33 credit hours is required for the M Ed.

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Education Policy Studies Graduate Certificate

Contact Information

Educational Leadership and Policy Analysis
202 Hill Hall
573-882-8221
http://education.missouri.edu/ELPA/program_areas/degree_pages/policy_studies_certificate.php

The importance of education policy in U.S. society is evident in the attention it receives from scholars, politicians, media pundits, and citizens. Because nearly all citizens attend school for some part of their lives, they have ideas about what schools should accomplish and how they should be run. Politically, education policy receives a great deal of attention from policy makers at all levels and in all branches of government.

Economically, public education (pre-K through higher education) constitutes a major part of the states' budgets, and a significant local investment as well. In addition, researchers gain new perspectives by comparing U.S. public schools with the private sector, which provides education to a significant number of students in many locales, as well as with schools in other nations. In academe, the study of education policy is an interdisciplinary endeavor, involving scholars from philosophy, political science, economics, sociology, history, public administration, journalism, and other fields.

The graduate certificate in Education Policy gives students access to a coherent set of courses that will enable them to understand this complexity. The certificate provides students with:

- Knowledge they can apply to the study of education policy within their major discipline or to their work in policy settings.
- Skills in analyzing education policy issues, i.e., understanding differing values, political and economic arguments, costs/benefits, and policy processes.
- Conceptual tools to use in understanding and resolving policy implementation problems.

Required Courses (Nine semester hours/three courses)

- ED LPA 7458 Sociology of Education
- ED LPA 9460 Philosophic Theories in Education
- ED LPA 9462 History of U.S. Education Policy

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Elective Course (Three semester hours/one course)

- ED LPA 9459 International Education and National Development
- ED LPA 9463 Politics of Education
- ED LPA 9465 Policy Analysis Using Large Databases

Applications accepted anytime. For more information about this graduate certificate, contact the ELPA Department by phone at 573-882-8221 or by e-mail at elpagrad@missouri.edu.

Higher and Continuing Education Administration Graduate Certificate

Contact Information

Department of Educational Leadership and Policy Analysis
202 Hill Hall
573-882-8221
http://education.missouri.edu/ELPA/program_areas/degree_pages/HACE_certificate.php

Owing to multiple demands upon the academy for quality control, accountability, and productivity, administration of higher and continuing education has become increasingly complex. The Graduate Certificate in Higher and Continuing Education Administration is designed to address the need for enhanced understanding of the higher education institutional context and for improved skills in areas required for effective administration of the higher and continuing education enterprises.

The Graduate Certificate in Higher and Continuing Education Administration is designed to provide students with an overview of higher and continuing education administration and governance, and with some technical knowledge about various aspects of administration, e.g., budget and finance, higher education law.

Required Courses (Six semester hours/two courses)

- ED LPA 9450 Administration and Governance of Higher and Continuing Education
- ED LPA 9451 Higher Education Finance

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Elective Course (Six semester hours/two courses)

- ED LPA 9408 Seminar in Higher and Continuing Education: Higher Education Policy
- ED LPA 9440 Race, Gender and Ethnicity in Higher Education
- ED LPA 9444 Program Planning in Higher and Continuing Education
- ED LPA 9446 Student Affairs Administration
- ED LPA 9447 College Student Culture and Environment
- ED LPA 9449 History of Higher and Continuing Education in the United States
- ED LPA 9452 Overview of Higher Education
- ED LPA 9454 Introduction to Postsecondary Law
- ED LPA 9455 The Community College

For more information about this graduate certificate, contact the ELPA Department by phone at 573-882-8221 or by e-mail at elpagrad@missouri.edu.

Courses

See Educational Leadership & Policy Analysis (ED LPA) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Educational, School and Counseling Psychology Graduate Programs

Contact Information

College of Education
16 Hill Hall
573-882-7731
573-884-5989
http://education.missouri.edu/ESCP/

About the Program

ESCP offers master's, educational specialist, and PhD degrees in Educational Psychology, School Psychology, Counseling Psychology, and Health Education and Promotion. The PhD programs in counseling psychology and school psychology are accredited by the American Psychological Association. The 2005 Faculty Scholarly Productivity Index ranked MU's graduate program in counseling psychology 4th in the nation and the 2008 U.S. News & World Report ranked the Counseling Psychology Program 6th nationally.

Our faculty members create a rich and stimulating learning environment for students through their teaching, research, and service. ESCP has three centers that provide students and faculty with many opportunities to collaborate on research and service-related projects while focusing on improving life for learners in all environments:

Accreditation

The PhD programs in counseling psychology and in school psychology are accredited by the American Psychological Association (APA).

Career Opportunities

Our graduates find employment in a wide range of settings, including colleges and universities, public schools, agencies, clinics, hospitals, business and industry, rehabilitation centers, research laboratories and government service. Occupations include, but are not limited to,

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guidance counselors, licensed counselors, faculty members, school psychologists, health educators and educational researchers.

Degrees Available
The following degrees and emphasis areas are available:

Counseling Psychology (PhD, EdSp, M Ed)
Subspecialties of the M Ed include:
- Community/Agency Counseling
- Sport and Exercise Psychology
- Career Counseling and Development
- Elementary School Counseling
- Secondary School Counseling
- Mental Health Practices in Schools (online, also available as an EdSp degree)

Educational Psychology (PhD, M Ed, MA)
Subspecialties include:
- Cognition and Development
- Measurement and Statistics

Health Education & Promotion (PhD, M Ed, MA)

School Psychology (PhD, EdSp)

Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Educational, School and Counseling Psychology Faculty

Deborah L. Carr
assistant professor, PhD, University of Missouri.

David A. Bergin
associate chair, associate professor, PhD, Stanford University.

continued on next page

Kathleen Boggs
professor of professional practice, PhD, University of Utah.

Lisa Flores
associate professor, PhD, University of Missouri.

Craig L. Frisby
associate professor, PhD, University of California, Berkeley.

Glenn E. Good
professor, PhD, The Ohio State University.

Norman C. Gysbers
interim chair, Curators' Professor, PhD, University of Michigan.

Mary J. Heppner
professor, PhD, University of Missouri.

P. Paul Heppner
Curators' Professor, PhD, University of Nebraska.

Keith C. Herman
associate professor, PhD, University of Florida.

Joseph A. Johnston
professor, PhD, University of Michigan.

Andy Knoop
assistant clinical professor, Assessment and Consultation Clinic, PhD, University of Missouri.

Matt Martens
associate Professor, PhD, University of Missouri.

Melissa Maras
assistant professor, PhD, Miami University.

Richard T. McGuire
assistant teaching professor, PhD, University of Virginia.

continued on next page

Alex Morales
assistant professor, PhD, University of Nebraska-Lincoln.

Laurie B. Mintz
associate professor, PhD, The Ohio State University.

Cheryl A. Offutt
assistant professor, PhD, Michigan State University.

Steven J. Osterlind
professor, PhD, University of Southern California.

Wendy M. Reinke
assistant professor, PhD, University of Oregon.

Roberta Scholes
associate teaching professor, PhD, University of Missouri.

Alex Waigandt
associate professor, PhD, University of Oregon.

Kenneth Wang
assistant professor, PhD, Pennsylvania State University

Ze Wang
assistant professor, PhD, University of Missouri.

Stephen D. Whitney
assistant professor, PhD, University of Washington.

Barbara Williamson
associate teaching professor, PhD, University of Tennessee, Knoxville.

Roger L. Worthington
University of Missouri chief diversity officer, associate professor, PhD, University of California, Santa Barbara.

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Faculty Emeriti

John W. Alspaugh
professor emeritus, EdD, University of Missouri.

Robert L. Burton
professor emeritus, EdD, University of Oklahoma.

Richard B. Caple
professor emeritus, EdD, Teachers College, Columbia University.

Corrine S. Cope
professor emeritus, PhD, The Ohio State University.

Richard Cox
professor emeritus, PhD, University of Oregon.

Richard A. English
professor emeritus, PhD, University of Arizona.

Paul T. King
professor emeritus, PhD, Pennsylvania State University.

Joseph T. Kunce
professor emeritus, PhD, University of Missouri.

John F. McGowan
professor emeritus, PhD, University of Missouri.

Michael J. Patton
professor emeritus, PhD, The Ohio State University.

Richard W. Thoreson
professor emeritus, PhD, University of Missouri.

Robert R. Trimble
associate professor emeritus, PhD, Oklahoma State University.

Frank E. Wellman
professor emeritus, PhD, University of Nebraska.

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Virginia R. Wheeler
assistant professor emeritus, PhD, University of Missouri.

MA, M Ed or EdSp in Educational, School and Counseling Psychology

Admission Contact Information

Latoya Owens (owensla@missouri.edu)
16 Hill Hall; Columbia, MO 65211
573-882-7732

Admission Criteria

- Fall deadline: December 1
- Minimum TOEFL score: 580 (paper)
- Minimum GRE score: Preferred Verbal+Quantitative=1000
- Minimum GPA: 3.0

Deadlines

- M Ed/MA in Health Education & Promotion deadline is rolling
- M Ed, EdSp track in Mental Health Practices in Schools (online degrees); Deadline for online degree is rolling admission.

If an applicant is admitted but does not hold a bachelor's degree in a related discipline or does not have relevant background course work, the applicant must complete prerequisite courses as specified by the faculty of the department.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Educational, School & Counseling Psychology Program:

- Departmental Application (PDF)
- 3 letters of recommendation (PDF form)
- GRE scores

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Doctorate in Educational, School & Counseling Psychology

Admission Contact Information

Latoya Owens (send email to Latoya Owens)
16 Hill Hall
Columbia, MO 65211
573-882-7732

Admission Criteria

- Fall deadline: December 1
- Minimum TOEFL score: 580 (paper)
- Minimum GRE score: Preferred Verbal+Quantitative=1200

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Educational, School & Counseling Psychology Program:

- Departmental Application (PDF)
- 3 letters of recommendation (PDF form)
- GRE scores

Courses

See Educational, School and Counseling Psychology (ESC PS) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Electrical and Computer Engineering Graduate Programs

Contact Information

349 Engineering Building West
Columbia, MO 65211
Phone: 573-882-4436
Email: umcengrecegradoff@missouri.edu
http://www.ee.missouri.edu/

About Electrical and Computer Engineering

Established in 1885, the Department of Electrical & Computer Engineering has a long tradition of excellence. Our classes are small with extensive design and laboratory experimentation. Research opportunities exist for both undergraduate and graduate students in Communication and Signal Processing, Physical Electronics, Intelligent Systems, Systems Modeling and Control, Nano and Micro Electronics, and Digital / Computer Systems.

Career Opportunities

Throughout the 20th century, the electrical engineering and computer engineering professions devised many of the innovations that dominated the technology landscape. In the 21st century, electrical and computer engineers will be at the forefront of a wide spectrum of technologies including nanotechnology, biotechnology, sensors, power generation, electric vehicles, and telecommunications.

Degrees Offered

At the University of Missouri, the Department of Electrical and Computer Engineering offers accredited programs of study leading to Bachelor of Science (BS), Master of Science (MS), and Doctoral (PhD) degrees.

Areas of study include:
Communications and Signal Processing. Satellite Remote Sensing, Geospatial Intelligence, Image/Video Processing, Land-mine Detection, Speech Signal Processing, Wireless Communications, and Underwater Communications.

Physical Electronics. Medical applications and advanced sterilization

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of food, water and products using pulsed power, Pulsed power applications and research (MU Gigawatt Rep-rate Test Stand. Lasers, high voltage switching and power conditioning, High voltage pulse technology and plasmas with the 2.5 MV, 250 kA MU-Terawatt Test Stand), Interesting plasma science applications, like high voltage accelerators to propel micro spacecraft, Electromagnetic launchers, Radio-frequency effects on electronics, Power electronics, Microwave photonics, electrooptics and photoconductive switches.

Intelligent Systems. Basic and Applied Research in Computational Intelligence (Neural Networks, Fuzzy Systems, Evolutionary Computation, Swarm Intelligence), Spatial Reasoning for Scene Understanding and Human/Robot Interaction, Pattern Recognition and Automated Decision Making, Eldercare Technology, Computer Vision and Image Processing, Human Activity Analysis, Cognitive Robotics, Landmine and Explosive Detection.

Systems Modeling and Control. Control systems, Computer process control, Digital and sampled data control, Robotics, System biology; Biologically realistice modeling, Computational, neuroscience, Theoretical neuroscience, Electrophysiology.

Nano and Micro Electronics. Nano/Microelectromechanical Systems (N/MEMS), Micro sensors and actuators, High K dielectrics, Nano structures, Complex heterostructures (i.e. HEMTs, VCSELs, detectors, HBTs, etc), BioMEMS and biomedical microsystems.

Digital System and Circuit Design, Computer Process Control. Excellent computer equipment and other laboratory facilities are used for research sponsored by various government and industry sources. The ECE department is the home department of the following University centers: Center for Geospatial Intelligence, Center for Micro/Nano Systems and Nanotechnology, Center for Eldercare and Rehabilitation Technology, Center for Physical Electronics and Power Electronics, Center for Electromechanics and Energy Conversion, Interdisciplinary Center for Research in Earth Science Technologies, Institute for Computational Neurobiology.

Internal Funding

Teaching Assistantships. Teaching assistantships are normally awarded to

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qualified graduate students with appropriate communication skills who assist faculty members in various phases of instruction. International students may not be appointed to teaching assistantships in their first semester on campus. International students must pass a language screening test at a proper level to be eligible for the TA positions available.

Research Assistantships. Research assistantships are granted to students qualified for working with professors on particular research projects. The research assistants are selected by faculty members who have research funds to support graduate students. Therefore, students should contact the faculty members directly for the RA possibility.

Fellowships. The department faculty actively pursue funding for selected research fellowships. Available fellowship opportunities can be found by contacting the ECE Graduate Office. Additionally, a limited number of "Teaching Fellows" are awarded annually to outstanding PhD students, particularly for those preparing for academic careers. Details can obtained from the ECE Graduate Office.

Electrical and Computer Engineering Faculty

Noah D. Manring
chair, professor, PhD, Iowa State University.

Randy Curry
professor, PhD, University of St. Andrew, Scotland.

Curt Davis
professor, PhD, University of Kansas.

Shubhra Gangopadhyay
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Dominic Ho
professor, PhD, Chinese University of Hong Kong.

James M. Keller
director of graduate studies, Curators' Professor, PhD, University of Missouri.

continued on next page

Satish Nair
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Robert O'Connell
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Greg Engel
associate professor, PhD, Texas Tech University.

Naz Islam
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Justin Legarsky
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professor, PhD, Texas A&M University.

Mahmoud Almasri
assistant professor, PhD, Southern Methodist University.

Michela Becchi
assistant professor, PhD, Washington University in St. Louis.

Guilherme DeSouza
assistant professor, PhD, Purdue University.

Tony Xu Han
assistant professor, PhD, University of Illinois-Urbana/Champaign.

Alina Zare
assistant professor, PhD, University of Florida, Gainesville.

Zhihai He
associate professor, PhD, University of California, Santa Barbara.

Scott Kovaleski
associate professor, PhD, University of Michigan.

continued on next page

Jae Wan Kwon
assistant professor, PhD, University of Southern California.

Gregory Triplett
assistant professor, PhD, Georgia Institute of Technology.

Master of Science in Electrical or Computer Engineering (MS)

Admission

349 Engineering Building West, Columbia, MO 65211
Phone: 573-882-4436
Email: umcengrecegradoff@missouri.edu
http://www.ee.missouri.edu/

Admission Criteria

- Fall deadline: February 15
- Spring deadline: September 1
- International students only: Minimum TOEFL score: 550/213/80 (paper/computer/internet), IELTS score: 5.5
- GRE score: 80th percentile Quantitative. The graduate committee will also consider the Verbal and Analytic scores.
- Minimum GPA: 3.0 for the last 60 hours

Applications received after these deadlines will be evaluated as time allows.

Required Application Materials

To the Graduate School:

- GRE scores/TOEFL scores
- 3 letters of recommendation from persons familiar with the applicant's engineering or related work
- Written statement of purpose
- Transcripts

Note: when registering for GRE, GMAT or TOEFL exams, be sure to designate your program of interest at the University of Missouri.

Admissions Criteria for the MS in Electrical or Computer Engineering

To be accepted outright by the Director of Graduate Studies (DGS), the student needs to have a BS degree in either Electrical Engineering or

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Computer Engineering in addition to meeting the above requirements. Students who meet the academic requirements but have degrees in other Engineering or Science disciplines can be accepted directly into the MS program by the Graduate Program Committee (GPC). Such students are strongly encouraged to consult with the DGS or their advisor about appropriate bridge courses. Based on individual circumstances, students may be advised to register as an undeclared graduate student to fill in background course work prior to admission into the department.

Students who do not meet the above requirements may still be admitted on Probation by the GPC if there are mitigating factors. Students admitted on Probation must receive at least a 3.0 GPA for the first 12 hours of graded graduate coursework completed in their first two semesters. Failure to achieve this GPA will result in expulsion from the ECE MS program.

Appeal Process

All students have the right to a timely formal appeal to the GPC. Upon receipt of an admission decision or disciplinary action, the student has 10 working days in which to request a formal appeal. The DGS will convene a meeting of the GPC, the student, and the student's advocate (if appropriate) within 10 working days of receiving the request. The decision of the GPC at the hearing is final.

Degree Requirements

To fulfill the requirements for the MS degree, the following rules apply:

- A candidate must complete 30 hours, including at least 12 hours of 8000-level graded course work (exclusive of ECE 8990 or ECE 8085 or ECE 8010 hours).
- At least six of these graded 8000 level course hours need to come from ECE.
- At least 15 hours of graded course work (total combination of 7000 and 8000 level courses, exclusive of ECE 8990, 8085, or 8010 hours) must be taken from the Electrical and Computer Engineering Department course offerings.
- A maximum of six hours of graduate credit may be transferred from another campus in the University of Missouri System or other university, while a maximum of eight hours of graduate credit may be used from a previous MU master's degree.

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- At most, three hours of course work in Supervised Study (ECE 8010) may be taken during the MS program and they will be graded on an S/U basis.
- At least one course from each of three different emphasis areas must be taken; a minimum of two of the emphasis areas must be in Electrical and Computer Engineering. (Each ECE graduate course is designated to an emphasis area. Contact the ECE graduate office for a current list).
- A minimum of 3 hours to a maximum of 6 hours of research (ECE 8990) or problems (ECE 8085) are required, based on whether the
- student writes a Masters thesis or a Masters Report.
- The student's cumulative GPA for courses at MU must be at least 3.0 to graduate.

The requirements for the MS Degree must be met within an eight year period. Each candidate must pass a final oral examination to demonstrate mastery of the work included in the thesis or in a substantial independent project. These MS requirements apply to ECE graduate students first enrolled in MU ECE in the Fall semester 2007 or later. UM ECE graduate students enrolled prior to Fall semester 2007 may choose to follow the MU ECE MS requirements that were in effect for their MU ECE graduate admission semester.

Academic Probation

A student whose GPA drops below 3.0 is automatically placed on academic probation. In such a case, the student has one semester to raise his or her cumulative GPA to 3.0. Failure to do so will result in expulsion from the program. Additionally, a student who receives the grade of "C" in 9 hours of coursework will be expelled. As with acceptance, students here also have a right to the same formal appeal process described above.

Thesis Option

For students under the Thesis Option of the MS degree, i.e., students enrolling for ECE 8890, a Request for Thesis Committee form is required to be submitted for approval by the department DGS and the Graduate School by the end of the student's second semester.
A thesis committee is composed of three members of the MU faculty: a major adviser from the academic program, a second reader from the academic program, and an outside reader who is a member of the

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graduate faculty from a different MU graduate program. Upon approval of the department DGS, the student may petition the Graduate School to allow a person who is not a member of the MU graduate faculty to serve as the third reader. The petition should include a written justification for such a request and a copy of the person's curriculum vitae. The Graduate School maintains copies of curriculum vitae previously received and approved, and if such a request is anticipated, the student should contact the Graduate School to see if the curriculum vita of a particular person is already on file.

Information about submitting the thesis can be found in the Thesis and Dissertation Guidelines.

Non-Thesis Option

For students who enroll in ECE 8085 (Problems), a problem report rather than a thesis is required. The student is not required to submit the M-2 form (request for a thesis committee). Instead, the student must have the report approved by his or her advisor and two other members of the graduate faculty, forming the student's Problem committee. It is not required that a member outside of ECE be included, although it is permissible for such a member of the MU graduate faculty to be appointed. The student must defend the problem report to the committee, and make any needed adjustments in format and corrections/clarifications based on input from the committee. A final copy of the Problem Report must be filed with the ECE graduate office and is forwarded to the Graduate School.

Report of the Master's Examining Committee

The purpose of the Report of the Master's Examining Committee Form is to have an official record of the final examining process, whether it is a thesis defense or presentation of a report. The student's committee will indicate on this form if the student has passed the final exam. This Form must be submitted to the Graduate School by a deadline for the semester in which the students plan to graduate. For a report option, the 3rd reader of the committee may be from the student's department. The form is due in the Graduate School two weeks prior to graduation.

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Master of Engineering in Electrical or Computer Engineering (ME)

The requirements for the Master of Engineering degree are the same as those for the Master of Science degree with the following exceptions:

- The student must complete at least 36 hours of graduate courses.
- A minimum of 30 credit hours must be earned from University of Missouri System institutions.
- At least 18 hours must be courses offered by the electrical and computer engineering department.
- ECE 8085, ECE 8990, ECE 8010 may not be taken
- No final examination is required

The entrance requirements for the MS and ME degrees are the same.

Doctorate in Electrical and Computer Engineering

Admission Contact Information

349 Engineering Building West
Columbia, MO 65211
573-882-4436
Email: umcengrecegradoff@missouri.edu

Admission Criteria for the PhD Electrical or Computer Engineering

- Deadline for Fall entrance: February 15
- Deadline for Spring entrance: September 1
- International students only: Minimum TOEFL score: 550/213/80 (paper/computer/internet), IELTS score: 5.5;
- Minimum GRE score: 90th percentile quantitative. The graduate committee will also consider the Verbal and Analytic scores;
- Minimum GPA: 3.5 (MS graded coursework);
- Holds the equivalent of a BS degree in electrical or computer engineering with an outstanding record, or holds the equivalent of an MS degree in electrical or computer engineering; and
- Consideration in doctoral program admissions is given to the applicant's grade trends, experience and maturity, and to the availability of expertise in areas of the applicant's technical interest.

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Required Application Materials

To the Graduate School:

- GRE scores/TOEFL scores
- 3 letters of recommendation from persons familiar with the applicant's engineering or related work
- Statement of purpose and research interests
- Transcripts

Note: when registering for GRE, GMAT or TOEFL exams, be sure to designate your program of interest at the University of Missouri.

Doctoral Admission Criteria

In addition to the above requirements, to be accepted outright by the Director of Graduate Studies (DGS), the student needs to have a MS degree in either Electrical Engineering or Computer Engineering.

Students who meet the academic requirements but have degrees in other Engineering or Science disciplines can be accepted into the PhD program by the Graduate Program Committee (GPC).

Students who don't meet the above requirements may still be admitted by the GPC if there are mitigating factors. Consideration in doctoral program admissions is given to the applicant's grade trends, experience and maturity, and to the availability of expertise in areas of the applicant's technical interest.

Outstanding BS students who meet the following requirements may be accepted directly for advisement in the department's doctoral program:

- Holds the equivalent of a BS degree in electrical or computer engineering
- GRE quantitative score of at least the 90th percentile
- TOEFL score of at least 550 paper based, 213 computer based, IELTS score: 5.5
- A 3.5 or better grad point average (A=4.0) in their undergraduate studies
- Submission of three letters of recommendation from persons familiar with the applicant's engineering or related work
- Submission of a written statement of research interests

Additional information can be obtained from the Graduate Division of the Department of Electrical and Computer Engineering, 349 Engineering

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Building West, Columbia, MO 65211, or via email: umcengrecegradoff@missouri.edu.

Appeal Process

All students have the right to a timely formal appeal to the GPC. Upon receipt of an admission decision or disciplinary action, the student has 10 working days in which to request a formal appeal. The DGS will convene a meeting of the GPC, the student, and the student's advocate (if appropriate) within 10 working days of receiving the request. The decision of the GPC at the hearing is final.

Doctoral Degree Requirements

- The student must be qualified to be a PhD candidate.
- Students admitted with an MS degree must prove competency in a written qualifying examination conducted by a PhD qualifying committee within 3 semesters of admission.
- Students admitted directly from a BS degree program must complete the 24 hours of graded coursework requirements of the MS degree during the first two years of their program. This will prepare them for the PhD qualifying examination process, to be passed within 4 semesters after this requirement is satisfied, and will allow them to obtain an MS degree if a thesis or project report is completed and defended, consistent with MS requirements, or to obtain an ME degree once the course work requirement has been satisfied. A student may petition the faculty for an extension of the two year requirement.
- A minimum of 72 semester hours beyond the BS are required by the Graduate School; the student's doctoral program committee sets the total number of credit hours and specific courses to be completed as part of his/her PhD program. However, the Graduate School requires a minimum of 15 hours of 8000/9000 level classes to be taken at MU exclusive of research, problems, and supervised study.
- The candidate must pass a written and oral comprehensive examination.
- The student must complete a doctoral dissertation on a topic approved by his or her Doctoral Advisory Committee and defend the dissertation in an oral final examination.
- These PhD requirements apply to ECE graduate students first enrolled in MU ECE in the Fall semester 2007 or later. UM ECE graduate students enrolled prior to Fall semester 2007 may choose to follow the MU ECE PhD requirements that were in effect for their MU ECE graduate admission semester.

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Courses

See ELECTRICAL AND COMPUTER ENGINEERING (ECE) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Engineering – Master of Engineering (ME)

Contact

College of Engineering
W1025 Lafferre Hall
Columbia, MO 65211-2200
http://engineering.missouri.edu/

About the Master of Engineering (ME)

The Master of Engineering (ME) is a 36 credit hour plan of study. Specific course requirements are determined by individual engineering departments. Interdisciplinary coursework is also possible. The ME program does not require a thesis or project. However, departments may design an internship, exam, or other capstone experience. Courses are taught by College of Engineering faculty (see specific disciplines for faculty lists).

Eligibility

Students will be required to possess a bachelor's degree from an ABET accredited program and have an undergraduate GPA of at least 3.0. Departments may make exceptions or have other specific admission requirements.

For More Information

For application, admission, and degree requirements please contact the office of the associate dean for academic programs in the College of Engineering at 573-882-4765 or the specific Engineering Department of interest.

English Graduate Programs

Contact Information

College of Arts and Science
107 Tate Hall
573-882-6421
http://english.missouri.edu

Subject Areas

Lecture courses, seminars and directed research are available in British and American language and literature, creative writing, folklore and oral tradition, critical theory, rhetoric and composition, language and linguistics, and African diaspora studies.

Funding

Students admitted to the graduate program usually receive a fellowship or teaching assistantship. Outstanding applicants will also be eligible to compete for a variety of college and university fellowships. The deadline for applications to both the MA and PhD programs is January 1. Announcements of awards are made by early April.

Publications Experience

Students will also have the opportunity to assist faculty in editing *The Missouri Review*, a nationally recognized journal of fiction, poetry and essays; *Oral Tradition*, the only journal involved in the comparative study of oral traditions; *The Eighteenth Century Novel*; and *The Journal for Early Modern Cultural Studies*.

More Information

For additional information concerning degree programs or for fellowship and assistantship application forms, please write the director of graduate studies in English, 107 Tate Hall, Columbia, MO 65211; call 573-882-1801; or fax 573-882-5785. Also see the departmental Web site at http://english.missouri.edu.

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English Faculty

Patricia Okker
chair, professor, PhD, University of Illinois.

Noah Heringman
associate chair, associate professor, PhD, Harvard University.

Samuel Cohen
director of graduate studies, assistant professor, PhD, CUNY.

Elizabeth Chang
director of undergraduate studies assistant professor, PhD, University of California - Berkeley.

Martha Patton
director of composition, assistant professor, PhD, University of Missouri.

Scott Cairns
director of creative writing program, professor, PhD, University of Utah.

Aliki Barnstone
professor, PhD, University of California-Berkeley.

John M. Foley
professor, PhD, University of Massachusetts.

Clenora Hudson-Weems
professor, PhD, University of Iowa.

Elaine Lawless
professor, PhD, Indiana University.

Trudy Lewis
professor, PhD, University of Illinois-Chicago.

Devoney Looser
professor, PhD, SUNY-Stony Brook.

Speer Morgan
professor, PhD, Stanford University.

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Karen Piper
professor, PhD, University of Oregon.

Sw. Anand Prahlad
professor, PhD, University of California-Los Angeles.

Thomas V. Quirk
professor, PhD, University of New Mexico.

Ellie Ragland
professor, PhD, University of Michigan.

David T. Read
professor, PhD, University of Chicago.

Richard B. Schwartz
professor, PhD, University of Illinois.

Marly Swick
professor, PhD, The American University.

Donald Anderson
professor emeritus, PhD, Duke University.

Robert M. Bender
professor emeritus, PhD, University of Michigan.

Thomas D. Cooke
professor emeritus, PhD, University of Pittsburgh.

Donald J. Crowley
professor emeritus, PhD, The Ohio State University.

Albert J. Devlin
professor emeritus, PhD, University of Kansas.

Howard Fulweiler
professor emeritus, PhD, University of North Carolina.

Howard Hinkel
associate professor emeritus, PhD, Tulane University.

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Charles H. Hinnant
professor emeritus, PhD, Columbia University.

Richard A. Hocks
professor emeritus, PhD, University of North Carolina.

William V. Holtz
professor emeritus, PhD, University of Michigan.

Winifred B. Horner
professor emerita, PhD, University of Michigan.

Douglas G. Hunt
associate professor emeritus, BA, Oxford University.

William M. Jones
professor emeritus, PhD, Northwestern University.

Timothy Materer
professor emeritus, PhD, Stanford University.

Lynne McMahon
professor emerita, PhD, University of Utah.

Catherine Parke
professor emerita, PhD, Stanford University.

M. Gilbert Porter
professor emeritus, PhD, University of Oregon.

John R. Roberts
professor emeritus, PhD, University of Illinois.

Sherod Santos
professor emeritus, PhD, University of Utah.

Gladys Swan
associate professor emerita, MA, Claremont Graduate School.

C. Gilbert Youmans
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continued on next page

Vicki Carstens
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Matthew Gordon
associate professor, PhD, University of Michigan.

Andrew Hoberek
associate professor, PhD, University of Chicago.

George Justice
associate professor, PhD, University of Pennsylvania.

William Kerwin
associate professor, PhD, University of North Carolina-Chapel Hill.

Maureen Konkle
associate professor, PhD, University of Minnesota.

April Langley
associate professor, PhD, University of Notre Dame.

Emma Lipton
associate professor, PhD, Duke University.

Christopher Okonkwo
associate professor, PhD, Florida State University.

Jeff Rice
associate professor, PhD, University of Florida.

Carsten Strathausen
associate professor, PhD, University of Oregon.

Martha Townsend
associate professor, PhD, Arizona State University.

continued on next page

Nancy West
associate professor, PhD, University of North Carolina-Chapel Hill.

Frances Dickey
assistant professor, PhD, Johns Hopkins University.

Rebecca Dingo
assistant professor, PhD, The Ohio State University.

Jenny Edbauer Rice
assistant professor, PhD, University of Texas at Austin.

Sheri-Mari Harrison
assistant professor, PhD, University of Miami.

Joanna Hearne
assistant professor, PhD, University of Arizona.

Johanna Kramer
assistant professor, PhD, Cornell University.

Ellen J. Levy
assistant professor, MFA, The Ohio State University.

Anne Myers
assistant professor, PhD, UCLA.

Alexandra Socarides
assistant professor, PhD, Rutgers University.

Maureen Stanton
assistant professor, MFA, The Ohio State University.

Donna Strickland
assistant professor, PhD, University of Wisconsin-Milwaukee.

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Master of Arts in English

Admission

Contact Information
Victoria Thorp (thorpv@missouri.edu)
107A Tate Hall, Department of English; Columbia, MO 65211
573-882-4676

Admission Criteria

- Fall deadline: January 1
- Minimum TOEFL score: 500 (paper)
- Minimum GRE score: not set
- Minimum GPA: 3.0 overall, higher in courses in major
- Majored in English as an undergraduate, with at least 18 hours in upper division courses in literature or linguistics. Students with other undergraduate majors may be admitted provided their background in English studies is suitable and provided they complete an appropriate course of preliminary study. Promising students who do not meet one or more of these criteria may at the discretion of the director of graduate studies be encouraged to enroll as non-degree graduate students.

Required Application Materials

To the Graduate School (210 Jesse Hall; Columbia, MO 65211):

- All required Graduate School documents

To the Program (go there for details):

- English Department application form
- GRE scores; both general and subject tests are required
- 3 letters of recommendation (use departmental form)
- Official transcripts
- Statement of purpose
- 2 10-20 page critical/scholarly papers (1 for creative writing applicants)
- *Creative writing applicants:* also submit a sample of your fiction (30 pages) and/or poetry (20 pages) or a one-act play
- Supplementary information sheet (for MA/PhD and PhD track applicants only)

Financial Aid from the Program

Some programs require an extra form or statement from those who

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wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Plan of Study

The MA is a 4-semester (2-year) program with 30 hours of course work (at least 15 hours at the 8000-level) in English.

- MA students may take up to 6 hours (7000-level or above) outside the English Department.
- In addition to literary study, students may also select from among the 6 emphasis areas to accompany the program in British and American Literature: African Diaspora Studies, Creative Writing, Critical Theory, Folklore and Oral Tradition, Language and Linguistics, and Rhetoric and Composition.
- A foreign language is not required for the master's degree.

Final Assessment Options

A student may elect to write an MA thesis (while taking 6 hours of English 8090), to present a portfolio and take an oral exam, or to take a written comprehensive exam based on a reading list.

Thesis

Students who choose the MA thesis (50-75 pages) should, at the outset of master's work, discuss possible thesis topics with the faculty member or members who seem most likely to constitute the student's MA Thesis Committee (two English department members and one outside member). Students present and defend their theses to this committee in an oral examination.

Portfolio/Oral Exam

Students electing this option will chose two faculty members to work with in revising two essays previously written during their M.A. work. The Director of Graduate Studies, in consultation with the student, will chose a third faculty member to serve on the student's portfolio committee. Students will defend the two revised essays, as well as those not chosen for revision, in a two-hour oral exam. The committee may pass or fail the examinee on any part(s) of the portfolio. In the case of partial or total failure, the student will retake the oral portions that were failed and may need to revise further one or both of the revised essays.

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Written Exam Based on Reading List

The exam consists of three questions answered over a four-hour time period. Students in Literature and in Literature with a Creative Writing Emphasis are assigned to a three-member M.A. Comprehensive Exam Committee and write on three literature-based questions. Students with emphases in African Diaspora, Critical Theory, English Language & Linguistics, Folklore & Oral Tradition, or Rhetoric & Composition are assigned to a committee that includes two members from literature and one member from the emphasis area. They write two literature-based questions and one emphasis-area-based question.

Satisfactory Progress

The Department of English expects all candidates to make satisfactory progress toward completing their graduate degrees. The MA should be completed within three calendar years after matriculation. No grades of "C" will be counted toward the completion of the required number of hours for the MA.

MA/PhD Track

The department also offers an MA in an MA/PhD program intended for especially well-prepared students who have BA degrees and know they wish to pursue the PhD. It offers enhanced financial aid and an accelerated time to degree. Students complete MA requirements and begin taking PhD course work in their second year in the program. Academic requirements for the two degrees are identical with the academic requirements for the separate MA and PhD degrees.

Doctorate in English

Admission

Contact Information
Victoria Thorp (thorpv@missouri.edu)
107A Tate Hall, Department of English; Columbia, MO 65211
573-882-4676

Admission Criteria

- Fall deadline: January 1
- Minimum TOEFL score: 500 (paper)
- Minimum GRE score: not set
- MA in English or its equivalent

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Required Application Materials
To the Graduate School (210 Jesse Hall; Columbia, MO 65211):
- All required Graduate School documents

To the Program (go there for details):
- English Department application form
- GRE scores; both general and subject tests are required
- 3 letters of recommendation (use departmental form)
- Official transcripts
- Statement of purpose
- 2 10-20 page critical/scholarly papers (1 for creative writing applicants)
- *Creative writing applicants:* also submit a sample of your fiction (30 pages) and/or poetry (20 pages) or a one-act play
- Supplementary information sheet

Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Plan of Study
The PhD is a 5-year program with 30 hours of course work beyond the MA. At least 18 hours in English must be taken at the 8000-level (English 8095 and 9090 do not count toward the 18-hour requirement). Candidates with insufficient background in English may be required to take additional hours upon the recommendation of the advisory committee.

A student may elect one English 8000 problems course (a maximum of three hours of credit), with the prior consent of the director of graduate studies. A minimum of 18 hours of course work beyond the MA (excluding research hours) must be taken in residence at the Columbia campus in order for the candidate to be eligible for a PhD from the University.

Language Requirement
PhD students should determine how they will fulfill the departmental language requirement in consultation with their faculty advisor and other committee members, since different projects and different areas of study will require different levels of language proficiency. A student's committee

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can always recommend that the student pursue language study above and beyond the level required by the departmental language requirement for the purpose of their chosen dissertation project.

However, the purpose of the foreign language requirement is to ensure that all students have at least an awareness of their entrance into an international community of scholars and scholarship and ideally an ability to read literature and critical studies in other languages. Although simple fulfillment of the language requirement may not guarantee fluency in another language or culture, it should prepare students to read primary texts related to their fields and equip them with skills to conduct scholarly research on important secondary literature. To this end, the department is committed to the principle that all doctoral students who plan to study language and literature benefit from exposure to another language or languages.

A student may satisfy the foreign language requirement for the PhD in English by demonstrating either 1) basic proficiency in two foreign languages or 2) advanced proficiency in one foreign language.

To demonstrate basic proficiency the student must pass with a grade of B or better a) the intensive introduction to a language or b) the three-semester introductory sequence or c) one course at or beyond the third semester level in the language chosen (such as French or German 4110), or the equivalent of these courses elsewhere. The courses must have been completed or the examinations taken not more than five years prior to the candidate's enrollment in the PhD program. Because not all languages are taught using this format at the University of Missouri, students have the option to demonstrate basic proficiency in one of their two chosen languages by taking an introductory course in another language that is relevant to their research. A student who wishes to obtain this exemption must submit a letter, signed by the student and the chair of his or her committee, explaining why the course is relevant to his or her program of doctoral study. This exemption will be granted only for University of Missouri courses taken during the student's official degree program. Courses taken at another institution, or before the student begins the degree program, are not eligible for this exemption. Students cannot request this exemption for languages taught at MU using the regular structure outlined above (i.e., in a 3-course introductory sequence or a one-semester intensive introduction).

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To obtain advanced proficiency the student must either a) pass with a grade of B or better two upper class undergraduate courses (3000- or 4000-level, or the equivalent elsewhere) in the literature of the language chosen or b) pass with a grade of B or better one graduate class (7000- or 8000-level, or the equivalent elsewhere) in the literature of the language chosen. These courses may not be in translation, and any graduate course in a modern language must be taught in that language. Overall, the department recommends taking a graduate-level course as the best option for students who are able to do so, since such courses can also count towards the nine hours of non-English department coursework that PhD students can include in their program of study. Undergraduate language courses (4000-level or below) do not count towards graduate study at the University of Missouri.

The Director of Graduate Studies will work with students to try to arrange for testing for students with proficiency but without course work in an acceptable language (for instance, those who have lived in another country for an extended period of time). This option, and all other exceptions to the language requirement described above, are contingent upon 1) the student's ability to demonstrate a substantial connection between the language in question and his or her program of study, and 2) consent of the student's advisor.

Doctoral Committee

By the end of the first year, doctoral students must meet with their advisers to organize a doctoral committee. Students meet with this committee to plan course work and define their primary and secondary fields of study. This meeting satisfies the graduate school requirement for a PhD qualifying examination.

Comprehensive Examination

After all course work, the foreign language requirement and the residency requirement have been completed, the student takes the PhD comprehensive examination. This exam consists of a written section (the Preparatory Essay) and a two-and-a-half hour oral exam. For the comprehensive examination to be successfully completed, the doctoral program committee must vote to pass the student on the entire examination, both written and oral sections, with no more than one dissenting or abstaining vote. If a student fails either part of the exam, he or she will be allowed to retake that part. No student will be allowed

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to take any part more than twice. All doctoral candidates should realize that no comprehensive exam is limited to the candidate's course work.

Dissertation
As soon as possible after passing the comprehensive examination, a candidate should explore a dissertation topic under the guidance of the student's adviser. The doctoral dissertation is written under the direction of a member of the doctoral faculty at MU.

Creative Dissertation Option
The PhD candidate may choose to write a creative dissertation, which may take the form of a novel, a novella, a book-length collection of short fiction or a collection of poetry. To exercise this option, the candidate must have taken 9 to 12 hours of creative writing seminars as part of the PhD course work.

In addition to the "creative" part of the dissertation, the candidate will compose a prose introduction (2,500- word minimum), to be written after completion of the creative project, to demonstrate the correspondence between the candidate's academic studies and the creative project. The overall length required would be comparable with that of other dissertations approved by the department.

Satisfactory Progress
The Department of English expects all candidates to make satisfactory progress toward completing their graduate degrees. The comprehensive exam should be completed within five calendar years after matriculation, and the PhD should be completed within five calendar years after passing the comprehensive exam. No grades of C will be counted toward the completion of the required number of hours for the PhD.

Courses

See ENGLISH (ENGLSH) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Film Studies Courses

The interdisciplinary Film Studies Program combines interests in film and culture across the departments of English, German and Russian Studies, Romance Languages and Literatures, and Theatre. Students studying in those departments should discuss film studies courses with a faculty member or academic adviser.

Courses

See FILM STUDIES (FILM S) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Fisheries & Wildlife Sciences Graduate Programs

Contact Information

School of Natural Resources
302 Anheuser-Busch Natural Resources Building
573-882-3436
http://www.snr.missouri.edu/fw/

About the Program

A fisheries and wildlife degree in the School of Natural Resources is based on a program of study that includes communications, quantitative skills and basic courses in physical and social sciences. Core classes in biology and ecology and specialized courses that feature animal populations and their aquatic and terrestrial environments enhance the learning experience. Some areas of study include wildlife ecology, water quality, habitat management, fishery science and conservation biology.

Careers

Graduate studies in fisheries, limnology, conservation biology or wildlife prepare students for careers with state and federal agencies, consulting firms, private conservation organizations or academic institutions.

Graduate Certificates

Graduate certificates in conservation biology, college teaching and geographic information systems (GIS) are available to students who elect to take courses beyond those required for the graduate degree.

Facilities & Resources

In 1998, the Fisheries and Wildlife Sciences Program moved into the Anheuser-Busch Natural Resources Building. This building provides space for faculty and graduate student offices in close proximity to well-equipped research and teaching laboratories, classrooms and computer facilities.

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Baskett Wildlife Research and Education Center
The Thomas Baskett Wildlife Research and Education Area, formerly known as the Ashland Wildlife Research Area, is a 2,252-acre facility located five miles east of Ashland Missouri on Highway Y. In use since 1938, Baskett has become an integral part of the School of Natural Resources mission of teaching, research, and extension. The Baskett Wildlife Area is used as an outdoor laboratory for several classes including dendrology, ornithology, and wildlife research techniques, and has been the source of over 150 research publications. For more information see http://www.aes.missouri.edu/baskett/index.stm.

The Missouri Cooperative Fish and Wildlife Research Unit
The Missouri Cooperative Fish and Wildlife Research Unit affiliated with the department is operated through a cooperative agreement among the University of Missouri, the Missouri Department of Conservation and the United States Geological Survey. It is staffed with two Department of the Interior scientists who are members of the university faculty, offering graduate-level courses and directing graduate student research.

Vertebrate Collection
The School of Natural Resources also maintains an extensive teaching collection of the vertebrate animals of Missouri, surrounding states, and other countries. The bird and mammal collections contain more than 7,000 specimens. The Glen Smart waterfowl collection consists of more than 200 species of mounted waterfowl of the world. The fish collection contains about 25,000 preserved specimens, including fishes from Missouri and the Midwest; saltwater fishes from the Atlantic, Pacific and Gulf coasts; and about 3,000 freshwater and saltwater fishes from Thailand.

Funding
Fellowships, teaching and research assistantships are available for most applicants selected for admission. Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details. We strongly encourage applicants to contact faculty to determine the availability of research assistantships prior to applying to the program.

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Fisheries and Wildlife Faculty

John R. Jones
department chair, professor, PhD, Iowa State University.

Joshua J. Millspaugh
director of graduate studies, professor, PhD, University of Washington.

Mark R. Ryan
director of School of Natural Resources, professor, PhD, Iowa State University.

John Faaborg
professor, division of biological sciences; professor, fisheries and wildlife, PhD, Princeton University.

Charles H. Nilon Jr.
professor, PhD, State University of New York-Syracuse.

Matthew E. Gompper
associate professor, PhD, University of Tennessee.

Robert S. Hayward
associate professor, PhD, The Ohio State University.

Douglas B. Noltie
associate professor, PhD, University of Western Ontario.

Dylan C. Kesler
assistant professor, PhD, Oregon State University.

Craig Paukert
cooperative associate professor, unit leader – fisheries, Missouri Cooperative Fish and Wildlife Research Unit, PhD, South Dakota State University.

David Galat
cooperative associate professor, assistant unit leader-fisheries, Missouri Cooperative Fish and Wildlife Research Unit, PhD, Colorado State University.

continued on next page

Charles F. Rabeni
cooperative professor (emeritus), Missouri Cooperative Fish and Wildlife Research Unit, PhD, University of Maine.

Frank R. Thompson III
cooperative associate professor, project leader-United States Department of Agriculture, Forest Service, North Central Forest Experiment Station, PhD, University of Missouri.

Robert Pierce
extension assistant professor, PhD, University of Missouri.

Michael Hubbard
adjunct assistant professor, PhD, Iowa State University.

David Diamond
adjunct assistant professor, PhD, Texas A&M University.

Susan B. Jones
adjunct associate professor, PhD, University of Missouri.

Matthew Knowlton
adjunct assistant professor, PhD, University of Missouri.

Dana Morris
adjunct assistant professor, PhD, University of Missouri.

Diana Papoulias
adjunct assistant professor, PhD, University of Missouri.

Russell Reidinger
adjunct assistant professor, PhD, University of Arizona.

Scott Sowa
adjunct assistant professor, PhD, University of Missouri.

Donald Tillitt
adjunct assistant professor, PhD, Michigan State University.

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Larry Vangilder
adjunct associate professor, PhD, The Ohio State University.

Mark Wildhaber
adjunct assistant professor, PhD, North Carolina State University.

Application and Admission Information

Admission Contact Information

Graduate Secretary
302 Anheuser-Busch Natural Resources Bldg; Columbia, MO 65211
573-882-9422

Admission Criteria

- Fall deadline: Rolling
- Minimum TOEFL score: 79 internet-based; 550 paper-based
- Minimum GRE score: 50th percentile or higher preferred on each of the three components, or minimum Verbal + Quantitative = 1100
- Minimum GPA: 3.0 in last 60 hours
- Experience in research or management of natural resources. Practical skills are strongly considered.

Required Application Materials

To the Graduate School:

- All application materials must be submitted to the Apply Yourself online application system
- All required Graduate School documents
- Three letters of recommendation from people who can attest to the candidate's scholastic and conservation field work abilities
- Departmental application
- Statement of purpose
- GRE scores
- Publications (optional)

We *require* applicants to contact faculty to determine the availability of research assistantships prior to applying to the program.

An applicant contemplating graduate work in fisheries, limnology, conservation biology or wildlife should have a strong background in biological and physical sciences, including biology, botany, zoology,

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ecology, physiology and genetics. In addition, such taxonomic courses as plant taxonomy, invertebrate zoology, ichthyology, ornithology and mammalogy are highly desirable, as is a background in chemistry, mathematics, statistics and physics.

A background of 25 to 30 hours in biological sciences courses is desirable. Minor deficiencies may be remedied during the graduate program; major deficiencies may require preparatory coursework prior to consideration for admission.

Fisheries and wildlife degrees emphasize resource management at organismal, population or ecosystem scales. An emphasis on resource management helps distinguish our program from basic biology; therefore, course work in fisheries or wildlife management, environmental science, resource policy or other applied ecology fields is advantageous.

Master of Science in Fisheries & Wildlife Sciences

Master's students must complete, with a B average or better, a minimum of 30 hours of course work (15 hours or more at the 8000 course level). Research, problems, special investigations and special readings courses shall not exceed 12 of the 30 hours.

Plan of Study

Candidates are expected to design and have approved by their committee a plan of study during their first semester in residence and a thesis proposal by their second.

Thesis & Oral Examination

A thesis acceptable to the student's graduate committee shall be completed and defended at the final oral examination, which is given to all candidates before the degree is conferred.

Doctorate in Fisheries & Wildlife Sciences

The PhD degree in fisheries and wildlife is designed to prepare students for careers in research and teaching or other advanced scientific, academic or professional careers.

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Degree Requirements
The doctor of philosophy degree is conferred only upon those students who, after extensive study, have demonstrated a high level of achievement in their particular specialization in fisheries and wildlife and have completed independent research contributing to knowledge in the field.

Doctoral Committee
The student pursuing the doctoral program is expected to pass qualifying, comprehensive and final examinations administered by the student's doctoral committee. The committee shall be composed of a minimum of 4 members of the MU graduate faculty and will include at least 3 members from the student's doctoral degree program and 1 outside member from a different MU program. At least 2 of the committee members must be MU doctoral faculty.

Qualifying Examination
The qualifying examination includes a general knowledge examination and is designed to evaluate the student's background and determine areas that require further course work.

Plan of Study
The doctoral plan of study requires a minimum of 72 hours of graduate credit from courses taken at MU, transfer credit and research hours. This program must include at least 15 hours of 8000- and 9000-level course work exclusive of problems, readings and research. Up to 30 hours from an accredited master's program may be applied to the Plan of Study, subject to committee approval.

Residency Requirement
Students enrolled in the PhD program must also satisfy a residency requirement of at least 3 consecutive semesters in which the student is in residence on the MU campus and enrolled for 6 or more credit hours, unless a prior exception is approved by the director of graduate studies.

Courses

See Fisheries and Wildlife (FW) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Food Science Graduate Programs

Contact Information

College of Agriculture, Food and Natural Resources
256 William Stringer Wing
573-882-4113
http://foodscience.missouri.edu

Careers

Candidates are prepared for careers in research or advanced professional careers in the food industry, teaching positions in community and junior colleges, 4-year colleges and in supporting roles in academics or industry. Graduates also may play leadership roles in extension or other adult education programs, food production and quality assurance, or government agencies. Selected careers include research and development for private industry or the federal government, food plant supervision, technical operation, product development, nutrition, distribution, food service and food regulatory work.

Facilities and Resources

Departmental cooperation with the food industry is excellent. Special facilities for food science study and
research include chemical and microbiological laboratories and pilot plants to study food processing.

Degrees Offered

- Master of Science (MS)
- Doctor of Philosophy (PhD)

Funding

Assistantships are available to qualified students from funds provided by the Agricultural Experiment Station, research contracts and grants. Fellowships supported by industry and professional societies, based on national competition, also are available.

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Food Science Faculty

Azlin Mustapha
director of graduate studies, associate professor, PhD, University of Nebraska.

Fu-Hung Hsieh
professor, PhD, University of Minnesota.

Robert T. Marshall
professor emeritus, PhD, University of Missouri.

H. Donald Naumann
professor emeritus, PhD, University of Missouri.

Seonghee Cho
associate professor, PhD, University of Nevada - Las Vegas.

Andrew D. Clarke
associate professor, PhD, Colorado State University.

James Groves
associate professor, PhD, Kansas State University.

Ingolf Gruen
food science program chair, undergraduate advisor chair, associate professor, PhD, Virginia Tech.

Dae-Young Kim
assistant professor, PhD, Purdue University.

Mengshi Lin
assistant professor, PhD, Washington State University.

James Perfield II
assistant professor, PhD, Cornell University.

Bongkosh Vardhanabhuti
assistant professor, PhD, North Carolina State University.

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Janelle Elmore
adjunct assistant professor, PhD, University of Missouri.

Barry Langford
adjunct teaching instructor, JD, MS, University of Missouri.

Lillian Occena-Po
adjunct associate professor, PhD, Michigan State University

Master of Science in Food Science

Admission Contact Information

JoAnn Lewis (lewisj@missouri.edu)
256 William Stringer Wing
Columbia, MO 65211-5160
573-882-4113

Admission Criteria

- Fall deadline: April 1
- Spring deadline: October 31
- Minimum TOEFL score: 550/79 (paper/internet)
- Minimum GRE score: V+Q=1000 with neither section being below 400, A=3.5
- Minimum GPA: 3.0
- BS in food science from an accredited university

Required Application Materials

To the Graduate School:

- All required Graduate School documents
- 3 letters of recommendation (submitted through online Graduate School application or mailed directly to Food Science)

To the Program:
http://foodscience.missouri.edu/graduate/
Refer to the information at the link above.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact

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for details. Submit application for assistantships or fellowships to the Food Science Graduate Program, 256 William Stringer Wing, Columbia, MO 65211-5160. Additional information about courses of study, assistantships, or other material can be obtained from the same office.

Doctorate Degree in Food Science

Admission Contact Information

JoAnn Lewis (lewisj@missouri.edu)
256 William Stringer Wing
Columbia, MO 65211-5160
573-882-4113

Admission Criteria

- Fall deadline: April 1
- Spring deadline: October 31
- Minimum TOEFL score: 550/79 (paper/internet)
- Minimum GRE score: V+Q=1000 with neither section being below 400, A=3.5
- Minimum GPA: 3.0
- BS and an MS in food science from an accredited university or equivalent experience. In rare instances, an exceptional student will be allowed to study for the PhD without first completing the MS

About the PhD Program

The PhD degree can lead to careers in research, college or university teaching and research, or to administrative positions related to foods.

Degree Requirements

Requiring a minimum of 2 years beyond the master's degree, the doctor of philosophy degree prepares students for teaching, research or other professional careers in food science. A student must:

- Satisfactorily complete the master's degree program or its equivalent with a GPA of 3.0 or better
- Satisfactorily complete the written and oral qualifying examination
- Show evidence of satisfactory performance in the major area of study, inclusive of grade trends and comply with other Graduate School requirements for admission.

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Plan of Study
The program, to be completed under the guidance of a doctoral program committee, consists of:

- A course of study designed to fit the student's academic background and objectives — one-third of the credit earned under the plan of study is research credit, the remainder is in courses selected from food science and its supporting areas, such as chemistry, microbiology, physiology, nutrition, economics, marketing, management and statistics
- Acceptance of a dissertation based on research proposed, performed and defended by the student.

To satisfy degree requirements, a candidate must:

- pass a qualifying examination before the start of the 2nd semester of graduate studies. The exam is designed to test the student's ability to undertake advanced learning and carry out independent research.
- complete the Plan of Study and defend the PhD project proposal
- pass the comprehensive examination over the approved course of study
- present an acceptable dissertation and defend it in a final examination
- present an exit seminar on research
- prepare at least 1 manuscript, acceptable for submission to a refereed journal, before approval of the D-4 (Report of the Dissertation Defense Form) by the director of graduate studies

Courses

See FOOD SCIENCE (F_S) graduate courses in the MyZou online system.

END OF PROGRAM DESCRIPTION

Forestry Graduate Programs

Contact Information

School of Natural Resources
203 Anheuser-Busch Natural Resources Building
573-882-7242
http://snr.missouri.edu/forestry/academics/graduate-program.php

About Forestry

Forestry intersects both basic and applied science, involved with questions ranging from biophysical properties of forested ecosystems to plant population studies, but including overarching fundamental issues of sustainability of natural resources. Forestry graduate education provides enhanced opportunities and expertise in a variety of programs such as ecology, physiology, hydrology, conservation, policy or silviculture.

Degrees and Areas of Study

Graduate research programs in the Department of Forestry lead to an MS or PhD in forestry. Specialized graduate education can focus on, but is not limited to, studies in agroforestry, biometrics, community and landscape ecology, dendrochronology, economics, entomology, fire ecology, hydrology, physiological ecology, physiology, policy, silviculture, soils, forest management, stand dynamics, water quality and wood quality.

Graduate Certificates

Graduate certificates in conservation biology (http://www.conservbio.missouri.edu/certificate.html) and geographic information systems (GIS) (http://www.geog.missouri.edu/giscert/index.html) are available to students who elect to take courses beyond those required for the graduate degree.

Partnerships

The graduate program in the Department of Forestry involves partnerships with the USDA Forest Service, Northern Research Station, the Missouri Department of Conservation, the Missouri Department of Natural Resources, the US Geological Survey, the National Park Service

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and the United States Fish and Wildlife Service. Student may work closely with scientists in these agencies who have affiliated faculty appointments.

Career Opportunities
A graduate degree in Forestry is designed to prepare students for careers in academic institutions, consulting firms, non-governmental organizations, industry and state and federal agencies.

Facilities and Resources
Facilities available for research include well-equipped biometrics, ecology, dendrochronology, hydrology, physiology and wood quality laboratories in the Anheuser-Busch Natural Resources Building on campus at Columbia, the Horticultural and Agroforestry Research Center (HARC) and the Baskett Research Area.

Horticultural and Agroforestry Research Center. HARC is a 540-acre tract about 30 miles northwest of campus near New Franklin, Mo. It is in the loess hills overlooking the Missouri River Valley and is well-suited for agroforestry, agronomic and horticultural field studies.

Baskett Research Area. Thomas Baskett Wildlife Research and Education Area, formerly known as the Ashland Wildlife Research Area, is a 2,252-acre facility located five miles east of Ashland, Missouri. In use since 1938, Baskett has become an integral part of the School of Natural Resources mission of teaching, research, and extension. The Baskett Research Area is used as an outdoor laboratory for several classes including dendrology, Forest ecology, ornithology, and wildlife research techniques, and has been the source of over 150 research publications. For more information see http://www.aes.missouri.edu/baskett/.

Schnabel Woods. The Schnabel Arboretum Tract is an 80-acre tract of late successional forest on the bluffs near the Missouri River. It is located eight miles southwest of the MU campus near the river community of McBaine, adjacent to the Missouri Department of Conservation Eagle Bluff Conservation Area and the cross-state Katy Trail State Park. The Schnabel Tract represents a unique, relatively undisturbed example of a river-hills forest ecosystem complex not commonly found in Missouri. The area is used for undergraduate instruction, graduate research and demonstration.

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University Forest. University Forest is located at the southeastern edge of the Missouri Ozarks, 14 miles north of Poplar Bluff and near Lake Wappapello. It is uniquely situated at the junction of two major ecological sections of the state: The Ozarks and the Mississippi Alluvial Basin. Three forest ecosystem types converge near this area: upland oak-hickory, oak-shortleaf pine and bottomland hardwoods. Using the adjacent 7,000-acre University State Forest managed by the Missouri Department of Conservation, University Forest serves as a regional environmental education center. This area is used routinely by the faculty and students of the School of Natural Resources as an off-campus field station for undergraduate and graduate classes and research.

Additional Locations. In addition, lands of the United States Forest Service, United States Fish and Wildlife Service, Corps of Engineers, National Park Service, Missouri Department of Conservation and the Missouri Department of Natural Resources are available for certain research activities. Numerous research projects have also taken place on private lands.

Funding

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details. A limited number of research assistantships are available. They are awarded based on (1.) demonstrated scholastic accomplishment; (2.) GRE scores; and (3.) experience related to the proposed field of study.

Forestry Faculty

Rose-Marie Muzika
director of graduate studies, professor, PhD, Michigan State University.

Francisco X. Aguilar
assistant professor, PhD, Louisiana State University.

Bruce E. Cutter
professor, associate director academic programs, School of Natural Resources, PhD, University of Missouri.

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John P. Dwyer
associate professor, PhD, University of Missouri.

Harold E. Garrett
professor emeritus, PhD, University of Missouri.

Milon F. George
associate professor emeritus, PhD, University of Minnesota.

Michael A. Gold
research professor, PhD, Michigan State University.

Richard P. Guyette
research professor, PhD, University of Missouri.

Hong He
associate professor, PhD, Chinese Academy of Sciences, China.

Jason A. Hubbart
assistant professor, PhD, University of Idaho.

William B. Kurtz
professor emeritus, PhD, University of Arizona.

David R. Larsen
professor, PhD, University of Washington.

Stephen G. Pallardy
professor, PhD, University of Wisconsin.

Henry E. Stelzer
associate professor, PhD, Purdue University.

Marc J. Linit
professor, associate dean, College of Agriculture, Food and Natural Resources, PhD, University of Arkansas.

Thomas L. Payne
professor, vice-chancellor and dean, College of Agriculture, Food and Natural Resources, PhD, University of California-Riverside.

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Felix Ponder
cooperative associate professor, USDA Forest Service, PhD, Southern Illinois University.

Steve R. Shifley
cooperative associate professor, USDA Forest Service, PhD, University of Minnesota.

Jerry Van Sambeek
cooperative associate professor, USDA Forest Service, PhD, Washington University.

Daniel Dey
cooperative assistant professor, USDA Forest Service, PhD, University of Missouri.

John Kabrick
cooperative assistant professor, USDA Forest Service PhD, University of Wisconsin-Madison.

Application and Admission Information

Admission Contact Information

Dr. Rose-Marie Muzika
203 ABNR
Columbia, MO 65211
573-882-8835

Admission Criteria

- Fall deadline: June 30
- Spring deadline: October 15
- Minimum TOEFL score: 80 - internet
- Minimum GRE score: 50th percentile or higher preferred in each category or V+A=1100
- Minimum GPA: 3.0 in last 60 hours

Particular attention is given to the record of the last 2 years of undergraduate study, and/or the type and quality of professional experience since completion of the undergraduate degree. Doctoral candidates must demonstrate a higher level of achievement in each of these criteria.

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Required Application Materials

To the Graduate School:

- All required Graduate School documents
- 3 letters of recommendation from individuals qualified to evaluate scholarly capacity and professional qualities
- Letter of intent

To the Program:

- Departmental application (use form)
- GRE scores

Master of Science in Forestry

The master's degree in forestry is designed for students with an undergraduate degree in forestry or in one of the biological, physical or social sciences basic to forestry. The MS degree may lead students with previous professional education in forestry to prepare for research and or teaching, or to provide greater depth in a specialized area.
The MS is a research-based degree. The student is expected to work closely with a faculty advisor on original research, with the approval of the graduate committee. Advanced coursework is expected to complement and enhance the research project. Students complete a Thesis and are expected to publish their research results in peer-reviewed scientific journals.

Students without a Forestry Undergraduate Degree

Those without a baccalaureate degree in forestry may wish to further their education in forest science or to attain professional competence by completing course work in forestry. Work required of students without a forestry degree who want a professional forestry education includes courses in dendrology, utilization of forest resources, resource measurements, forest inventory, forest fire control and use, ecology, silviculture, forest information systems, watershed management, forest management, forest economics, and public resource policy. Some of these courses do not carry graduate credit.

MS in Forestry Plan of Study

To attain the master's degree, 30 hours of course work must be completed; 15 hours or more shall be 8000 level. Research, problems, special investigations and special readings courses shall not exceed 12

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of the 30 hours. The GPA of all course work submitted for the degree must be 3.0 or better.

Thesis & Exams
A master's thesis, or a minimum of 5 semester hours of non-thesis research acceptable to the student's committee, shall be completed before the final examination. Research toward a thesis normally shall not exceed 8 hours. Thesis requirements and defense are as defined by the MU Graduate School.

A final oral examination is given to all candidates before completion of the degree.

Doctorate in Forestry

The PhD degree in forestry is designed to prepare students for academic careers in research and teaching or other advanced scientific or professional careers. Only in the rarest cases are students admitted to the PhD program without a master's degree.

Ph.D. candidates conduct original research under the supervision of a faculty advisor or advisors and with the participation of the designated graduate committee. Students are expected to engage in coursework to prepare for careers in research, industry or academia. The Department of Forestry expects students to take part in professional and educational activities by giving presentations at conferences and presenting seminars. Ph.D. candidates complete a dissertation and are expected to publish their research results in peer-reviewed scientific journals.

Doctoral Committee in Forestry
The student pursuing the doctoral program is expected to pass a qualifying, comprehensive and final examination administered by the student's doctoral committee. This committee is structured as defined by the MU Graduate School and must have a minimum of 4 members, at least 3 members must be from the student's doctoral degree program and 1 outside member from a different MU program. At least 2 of the committee members must be MU doctoral faculty.

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Doctoral Qualifying Examination
The qualifying examination determines whether the student's background is adequate to enter the PhD program. It also is intended to ascertain if there are areas of weakness in which a candidate will be required to gain background through appropriate course work or areas that prohibit entry into the program.

Doctoral Comprehensive Examination
The objectives of the comprehensive examination are twofold:
1. to determine if a student has acquired sufficient depth and breadth of knowledge in selected areas of concentration
2. to evaluate the candidate's capacity to apply that knowledge in solving applied or theoretical problems.

Final Examination
The final examination is directed primarily toward exploration of the dissertation research project.

Foreign Language Requirements
Requirements for foreign language and a collateral field, if any, are determined by the student's doctoral program committee. The doctoral committee is expected to make an assessment of the student's needs as they relate to the student's background and educational objectives.

Dissertation
An independent scholarly dissertation approved by the student's adviser and program committee must be completed in a form acceptable to the doctoral committee.

Graduation Requirements
The PhD degree is conferred only upon those students who, after extensive study, have demonstrated a high level of achievement in their particular specialization in forestry and have completed independent research contributing to knowledge in the field.

Courses

See Forestry (FOREST) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Genetics Area Program Doctorate

Contact Information

Genetics Area Program
105c Life Sciences Center
(573) 882-2816; 1-877-GENE-PHD (1-877-436-3743)
http://www.gap.missouri.edu/

About the Program

The Genetics Area Program prepares graduates for teaching and research careers in genetics. The curriculum provides broad, individual training tailored to the career objectives of the student.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Genetics Area Program Faculty

Stephen Alexander
professor of biological sciences, PhD, Brandeis University. Mechanisms of DNA repair and resistance to anticancer drugs; mechanisms of protein secretion.

Karen L. Bennett
professor of molecular microbiology and immunology, PhD, State University of New York-Buffalo. Developmental biology of nematodes, molecular analysis of germline determination.

James A. Birchler
professor of biological sciences, PhD, Indiana University. Gene expression in Drosophila and maize.

Elizabeth A. Bryda
associate professor of veterinary pathobiology, PhD, Rutgers University and University of Medicine and Dentistry of NJ. Molecular genetic analysis of mouse models of renal disease and auditory disorders.

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Donald Burke
associate professor of molecular microbiology and immunology, PhD, University of California-Berkeley. Mechanism and evolution of catalysis by ribozymes and the molecular basis of retroviral inhibition by RNA-based drugs.

John F. Cannon
chair of Genetics Area Program, associate professor of molecular microbiology and immunology, PhD, University of Wisconsin-Madison. Genetics of Saccharomyces cerevisiae; role of protein phosphatase in cell cycle regulation; molecular genetic analysis of RAS function.

Anand Chandrasekhar
associate professor of biological sciences, PhD, University of Iowa. Molecular and cellular analysis of branchiomotor neuron development in zebrafish.

Arun K. Chatterjee
professor of plant pathology, PhD, University of Guelph. Plant-microbe interaction, regulation of expression of virulence genes in plant pathogenic bacteria, protein targeting in gram-negative bacteria; genetics of antibiotic production in fluorescent Pseudomonas.

Georgia L. Davis
associate professor of agronomy, PhD, University of Wisconsin. Genetic and physical mapping in maize, identification of maize genes to reduce aflatoxin.

George Davis
Professor of medical pharmacology and physiology, PhD MD, University of California-San Diego. angiogenesis, wound repair and cancer research.

Dongsheng Duan
associate professor of molecular microbiology and immunology, PhD, University of Pennsylvania. Application of recombinant adeno-associated virus (rAAV) in muscle gene therapy.

David W. Emerich
professor of biochemistry, PhD, University of Wisconsin-Madison. Symbiotic nitrogen fixation.

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Walter Gassmann
associate professor of plant microbiology and pathology, PhD University of California-San Diego. Molecular mechanisms of plant disease resistance and bacterial pathogenicity structure/function analysis of plant resistance and bacterial avirulence genes.

Craig Franklin
associate professor of veterinary pathology, PhD, DVM, University of Missouri. Pathogenesis of chronic intestinal mucosal inflammation and rodent animal models for human disease.

William R. Folk
professor of biochemistry, PhD, Stanford University. Gene expression in plants and animals, with particular emphasis upon use of molecular genetics to reduce cancer morbidity and improve human nutrition.

Michael Garcia
assistant professor of biological sciences, PhD, Mayo Clinic College of Medicine. Genetics and cell biology of neuronal development.

Miriam W. Golomb
associate professor of biological sciences, PhD, University of California-Berkeley. CBF transcription factors in cell cycle and development. Virulence genes in H. influenzae.

Jerome Gorski
professor of child health, MD, Northwestern University. Molecular genetics of birth defects.

Thomas J. Guilfoyle
professor of biochemistry, PhD, University of Illinois. RNA polymerase, hormone-regulated gene expression, in vitro transcription.

J. Perry Gustafson
professor of agronomy, PhD, University of California-Davis. Cereal genetics.

Gretchen Hagen
research professor of biochemistry, PhD, University of Georgia. Plant molecular biology, control of gene expression by plant hormones.

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Mark Hannink
professor of biochemistry, PhD, University of California-San Diego. Mechanisms of oncogenic transformation by retroviral oncogenes, transcription factors and gene regulation. Embryo-toxicity of environmental contaminants.

Gerald Hazelbauer
professor and chair of biochemistry, PhD University of Wisconsin. Transmembrane receptors, signaling, sensory adaptation and protein kinases in bacterial chemotaxis.

Lene J. Holland
associate professor, medical pharmacology & physiology, PhD, University of California-San Francisco. Regulation of gene expression by steroid hormones.

Timothy P. Holtsford
associate professor of biological sciences, PhD, University of California-Riverside. Evolution of fl oral traits, molecular evolution, systematics, conservation genetics.

Gary S. Johnson
associate professor, veterinary pathobiology, DVM, PhD, Kansas State University. Inherited diseases of man and domestic animals. Genetic risk factors for diabetic complications and cardiovascular diseases.

Martin L. Katz
professor of ophthalmology, PhD, University of California-Santa Cruz. Molecular basis for disease pathology in the hereditary ceroid-lipofuscinoses.

Toni Kazic
associate professor of computer science, PhD, University of Pennsylvania. Computational biology, bioinformatics, formal languages, and analysis of networks.

Mark Kirk
associate professor of biological sciences, PhD, Rice University. Stem cell therapies for neurodegenerative diseases & CNS tumors.

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Hari B. Krishnan
adjunct professor of agronomy, PhD, Washington State University. Modification of soybean seed composition, Rhizobium-soybean symbiosis.

David R. Lee
associate professor of molecular microbiology and immunology, PhD, University of Virginia. Major histocompatibility complex class I antigen presentation. Induction of CD8+ T lymphocyte responses. Activation of dendritic cells.

Mannie Liscum
associate professor of biological sciences, PhD, The Ohio State University. Photosignal transduction and hormone responses in higher plants.

Chris Lorson
associate professor of veterinary pathobiology, PhD, Washington University. Molecular genetics; spinal muscular atrophy; RNA processing.

Dennis B. Lubahn
professor of biochemistry/child health, PhD, Duke University. Biochemical genetics of estrogen and receptors: environmental and phytoestrogen action in ER-minus mice. Estrogens and DNA methylation/imprinting, and their functions in herbal medicine.

Mark E. Martin
associate professor of biochemistry, PhD, University of Mississippi Medical Center. Regulation of transcription factor activity.

Bruce A. McClure
associate professor of biochemistry, PhD, University of Minnesota. Self-incompatibility, biochemical and genetic basis for pollen rejection.

Michael D. McMullen
adjunct associate professor of agronomy, PhD, University of Chicago. Genetic and molecular basis of plant responses to biological stresses.

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Kathleen J. Newton
professor of biological sciences, PhD, Indiana University. Plant mitochondrial genetics.

Henry Nguyen
professor of plant sciences, PhD, University of Missouri. Molecular genetics of abiotic stress tolerance and plant productivity in stress environments and the application of genomics and genetic engineering technologies to crop improvement.

Brenda Peculis
associate professor of biochemistry, PhD, John Hopkins University. Ribosome biogenesis; RNA:RNA and RNA:protein interactions; RNA structure; nucleic acid biochemistry; protein structure/function.

Charlotte L. Phillips
associate professor of biochemistry/child health, PhD, North Carolina State University. Inherited connective tissue diseases and metabolic disorders.

David J. Pintel
professor of molecular microbiology and immunology, PhD, University of Illinois Medical School. Molecular genetics and biochemistry of parvovirus gene expression and RNA processing.

Lela K. Riley
professor and associate dean of veterinary pathobiology, PhD, University of Kansas. Investigation of pathogenic mechanisms and development of molecular diagnostics, characterization of animal models of human diseases.

R. Michael Roberts
curators' professor of animal sciences, DPhil, Oxford University. Maternal embryo interactions in early pregnancy.

Stefan Sarafianos
assistant professor of molecular microbiology and immunology, PhD, Georgetown University. Structural biology and enzymology of viral replication enzymes.

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James E. Schoelz
professor of plant pathology, PhD, University of Kentucky. Host specificity of plant viruses.

Raymond D. Semlitsch
professor of biological sciences, PhD, University of Georgia. Evolution of complex life cycles using amphibians as a model system.

David Setzer
professor of biological sciences, PhD, Stanford University. DNA-protein interactions; biochemical mechanisms in the transcription of eukaryotic genes; mechanisms of transcription termination; specific analysis of the zinc finger protein TFIIA and 5S rRNA gene regulation.

David A. Sleper
professor of agronomy, PhD, University of Wisconsin-Madison. Breeding and genetics of tall fescue and soybean.

Gary Stacey
professor of plant microbiology and pathology, PhD, University of Texas. Molecular biology of plant-microbe interactions; symbiotic nitrogen fixation; soybean biotechnology; and peptide transport in plants.

Change Tan
associate professor of biological sciences, PhD, University of Pennsylvania. Generating conditional mutations and studying cytokinesis during Drosophila gametogenesis.

John J. Tanner
professor of chemistry, PhD, Brown University. X-ray crystallography, proteins and enzymes, molecular dynamics simulations.

Jerry Taylor
professor of animal sciences, PhD Texas A&M. ID of genes responsible to variation in milk production, meat quality and feed conversion efficiency in cattle.

John C. Walker
professor of biological sciences, PhD, University of Georgia. Molecular mechanisms regulating cellular signaling in plants.

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Troy Zars
assistant professor of biological sciences, PhD, University of Notre Dame. Molecular, genetic, and systems approaches to memory processes in Drosophila.

Habib Zaghouani
professor of molecular microbiology & immunology, PhD University of Paris. Molecular mechanisms of T cell tolerance.

Shuqun Zhang
associate professor of biochemistry, PhD, University of Texas at Austin. Function of mitogen-activated protein kinases in plant stress responses.

Admission Contact Information

Admission Criteria

- Fall deadline: January 15
- Minimum TOEFL score: 580 (paper)
- Minimum GRE score: V+Q=1100, A=4.5
- Minimum GPA: 3.0 in last 60 hours
- Bachelor's degree
- One or more courses in each of the following: organic chemistry, biochemistry, mathematics (calculus and statistics), physics, introductory genetics
- Research experience highly desirable
- Broad background in biology

Deficiencies in the subjects listed can be remedied after admission.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Genetics Area Program:

- GRE scores
- Departmental application
- 3 letters of recommendation (use provided form)
- Personal statement

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Degree Requirements
The minimum requirements for the PhD degree are:

- advanced courses in genetics, biochemistry and molecular biology
- regular participation in the genetics area seminar program
- successful completion of a comprehensive examination
- at least one semester of teaching in a genetics course
- 3 seminar presentations
- research, dissertation and oral defense

These are beyond the Graduate School's requirements. Others are determined in consultation between the student and faculty adviser.

Courses

Contact the Genetics Area Program Doctorate at 573-882-2816 or 1-877-436-3743.

END OF PROGRAM DESCRIPTION

Geography Graduate Program

Contact Information

College of Arts and Sciences
8 Stewart Hall
573-882-8370
http://www.geog.missouri.edu/

About Geography

The Department of Geography offers a Master of Arts degree that prepares students for a variety of professions, including careers in academics, research, public service, and the private sector. The MA program has a high success rate of preparing students for doctoral study in top-tier geography departments across the United States.

A primary strength of the department is the blending of major research facilities and opportunities with individual student-faculty interaction to build a strong sense of community. Students interested in questions of human geography, the physical environment, or geographic information sciences will find that the department has facilities and faculty expertise to build a successful plan of study.

Core areas of study in the department include human geography, nature/society relationships, physical-environmental systems, and application of geographic information sciences. The faculty has an active program of research and field work in North America, the Middle East and Middle America. They pride themselves on a creative instructional and interdisciplinary pattern of activity. The department emphasizes close contact between faculty and graduate students.

Individualized graduate programs allow latitude in areas of specialization such as regional, cultural, and physical geography, as well as geographic information sciences, remote sensing, environmental studies and geographic education. Strong collateral course work in such fields as anthropology, soil and atmospheric science, economics, geology, political science, forestry, computer science and history meets the special interests of many graduate students.

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Facilities and Resources
An exceptional departmental collection of reference materials, including maps, journals and books, is available to graduate students in the department's Wheeler Library and Seminar Room. The holdings of Ellis Library in geography and related fields are extensive and MU's computer facilities are readily available. In addition, the department is home to the Geographic Resources Center (GRC), the Missouri Spatial Data Information Service and the Spatial Analysis and Modeling teaching laboratory. These facilities serve as an interdisciplinary center for GIS, remote sensing, cartography, computer graphics and digital spatial databases of enormous variety.

Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details. In Geography, a total of approximately 9-12 graduate teaching and research assistantships are awarded on a competitive basis annually. Applicants desiring consideration for one of these positions should indicate this in their application to the department.

Geography Faculty

Larry G. Brown
assistant professor, PhD, University of Missouri. White supremacy movements in the USA; geography of religion and belief systems; use of qualitative methods in geography; political and religious movements in Latin America.

C. Mark Cowell
associate professor, PhD, University of Georgia. Vegetation dynamics; presettlement vegetation patterns; disturbance regimes in eastern deciduous forests; human impacts on vegetation; application of GIS to analyzing landscape pattern and process; environmental ethics and resource management.

Curt H. Davis
adjunct professor, Ph.D., University of Kansas. Radar systems; RF & microwave signal propagation; wireless communication systems; satellite and airborne remote sensing systems; satellite altimetry; high

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resolution earth image processing; ice sheet mapping and change detection; digital elevation models; urban mapping and feature extraction; geospatial information processing.

Grant P. Elliott
visiting assistant professor, PhD University of Minnesota. Biogeography; dendochronology; climatology; geographical information systems.

William R. Elliott
adjunct professor, PhD , Texas Tech University. Biospeleology; cave atmospheres; pesticide studies; industrial hygiene.

Matthew W. Foulkes
associate professor, PhD, University of Illinois. Poverty migration in rural Missouri communities; geographic mobility of children; migration systems within trailer parks; Bosnian settlements in St. Louis.

Timothy L. Haithcoat
program director, Geographic Resources Center; Missouri Spatial Data Information Service, MS, University of Missouri. Implications of scale and resolution changes in GIS and Remote Sensing analyses; quantifying and visualizing accuracy of spatial data and derivative products; use of GIS and Remote Sensing at local government levels; conflation of linear networks of varying scales and accuracies; feature extraction from remotely sensed data; techniques for spatial data generalization.

James D. Harlan
assistant program director, Geographic Resources Center, MA, University of Missouri. Historic vegetation; mapping of the Lewis and Clark route across Missouri; rural Missouri communities.

Joseph J. Hobbs
chair, professor, PhD, University of Texas-Austin. Geography of the Middle East; pastoral nomadism; indigenous peoples and protected areas; research and education in Vietnam.

Robert B. Jacobson
adjunct professor; research hydrologist (U.S.G.S.), PhD, Johns Hopkins University. Quantifying the relations among physical river

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processes, habitat availability, and biotic responses in the Missouri River watershed; predicting the factors involved in channel instability in streams of the Missouri Ozarks and their effects on aquatic habitat.

Soren C. Larsen
assistant professor, PhD, University of Kansas. Politics of place; political ecology; sustainable development; indigenous peoples; territoriality; ethnography and qualitative methods.

Timothy C. Matisziw
assistant professor, PhD, The Ohio State University. Network analysis and design; location modeling; environmental conservation; urban/regional planning and risk assessment; geographic information science; transportation geography; urban/regional planning.

Gail S. Ludwig
associate professor emeritus, DA, University of Northern Colorado. GIS for K-12 students; instructional technology and multimedia development; necrogeography and geographic research methodology.

Mark H. Palmer
assistant professor, PhD, University of Oklahoma. Indigenous geographies; geographic information systems; natural resources; North America; history of cartography; qualitative methods; place-based approach to earth systems science.

Christopher L. "Kit" Salter
professor emeritus, PhD, University of California, Berkeley. The role of the road in American culture; small town growth and development; American popular culture and its use of landscape for icons.

Walter A. Schroeder
associate professor emeritus, PhD, University of Missouri. Reconstruction of the land cover of Missouri from nineteenth century field notes of the US General Land Office survey and other uses of those field notes; developing ecoregions of Missouri at different levels of generalization; historical geography of the eastern Ozarks, 1770-1830.

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Michael A. Urban
associate professor, PhD, University of Illinois at Urbana-Champaign. Physical and cultural dynamics of anthropogenic landscape change; historical patterns of resource perception and environment change; ecovery of streams following channelization and modification events; philosophical issues in geography and geomorphology; application of environmental ethics in environmental management.

Cuizhen (Susan) Wang
associate professor, PhD, Michigan State University. Theoretical development of optical and microwaveremote sensing; GIS and spatial analysis and applications; land use and land cover change mapping canopy radiative transfer modeling; quantitative estimation of biophysical attributes and soil moisture distribution.

Shannon White
geospatial extension specialist, Ph.D. North Carolina State University. Geospatial science; geographic education; instructional technology.

Application and Admission Information

Admission Contact Information

Dr. Soren Larsen
Geography admission page: http://www.geog.missouri.edu/grad/app.html

Admission Criteria

- Fall deadline: February 1
- Spring deadline: November 15
- Minimum TOEFL score: 500 (paper)
- Minimum GRE score: V+Q=1000
- Minimum GPA: 3.0

Preparation for graduate work in geography should include undergraduate courses in geography. Upon consultation with their adviser, students with insufficient background work in geography may be required to take additional undergraduate courses.

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Required Application Materials

To the Graduate School:

- All required Graduate School documents
- 3 letters of recommendation (use the form on Geography Web site, or submitted through the online application)

To the Geography Program: http://www.geog.missouri.edu/grad/app.html

- GRE scores
- Departmental application

Plan of Study MA in Geography

The Master of Arts degree requires completion of 32 semester hours of course work. Two research options are available: a thesis and a non-thesis option. The non-thesis option requires the completion of a research paper. 15 or more of the 32 hours must be in courses at the 8000 level. Non-thesis candidates may take no more than 6 hours of special problems, special readings, special investigations, or research.

Every student must take Geography 8750 and Geography 8760, 6 additional hours of seminar-structured course work and 6 hours of course work in geographic methods.

A student's specific program of courses is selected jointly by the student and the graduate adviser, designated during the first semester in residence. All students of either option must pass a comprehensive oral examination at the end of their graduate work.

Courses

See GEOGRAPHY (GEOG) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Geological Sciences Graduate Programs

Contact Information

College of Arts and Science
101 Geological Sciences Building
573-882-6785
http://geology.missouri.edu/index.html

About the Geological Sciences Program

The areas of research covered by faculty are broad and diverse, with the strongest research expertise in the general areas of geochemistry and tectonics. These strengths allow us to focus on problems identified by the National Research Council to be socially relevant and to be fundamental to an understanding of earth processes. Dynamic faculty, along with their students, are making significant contributions to numerous areas of basic and applied research. This research is supported by excellent, state-of-the-art analytical facilities in the department and on campus. Our graduate program prepares students for a wide range of professions within the geological sciences; students have been placed in private, federal, state, and academic institutions. Prospective students are encouraged to contact any faculty member directly for additional information.

Geological Sciences Faculty

Kevin L. Shelton
chair, professor, PhD, Yale University. Economic geology and stable isotope geochemistry.

Mian Liu
professor, PhD, University of Arizona. Geophysics and geodynamics.

Peter Nabelek
professor, PhD, State University of New York at Stony Brook. Petrology and geochemistry.

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Michael B. Underwood
professor, PhD, Cornell University. Marine sedimentation and tectonics.

Robert L. Bauer
director of graduate studies, associate professor, PhD, University of Minnesota. Structural geology and metamorphic petrology.

Francisco Gomez
associate professor, PhD, Cornell University. Paleoseismology and neotectonics.

Cheryl A. Kelley
associate professor, PhD, University of North Carolina at Chapel Hill. Biogeochemistry.

Kenneth G. MacLeod
associate professor, PhD, University of Washington. Paleontology and biogeochemistry.

Eric A. Sandvol
associate professor, PhD, New Mexico State University. Geophysics and seismotectonics.

Alan Whittington
associate professor, PhD, The Open University. Igneous & metamorphic petrology and tectonics.

Martin Appold
assistant professor, PhD, Johns Hopkins University. Hydrogeology and economic geology.

Marie-Helene Cormier
assistant professor, PhD, UC Santa Barbara. Marine geophysics and tectonics.

Karyn Rogers
assistant professor, PhD, Washington University, Geomicrobiology.

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Mitchell Schulte
assistant professor, PhD, Washington University. Organic geochemistry and geomicrobiology.

Miriam Barquero-Molina
field camp director, assistant teaching professor, PhD, University of Texas at Austin. Structural geology.

Degrees

The department offers two graduate programs: the master of science degree and the doctor of philosophy degree.

The master's degree program includes a thesis and a non-thesis option, both of which require 30 credit hours beyond the bachelor's degree. The thesis option is accomplished by taking 18 to 21 graduate course credits and preparing a written thesis involving 9-12 credits of research or problems credits. Students have until the middle of their second semester in residence at the university to choose a supervisor and a thesis topic. The non-thesis track requires 27 hours of graduate course credits plus 3 hours of research credit leading to completion of a smaller-scope research project.

The doctoral degree requires 72 hours beyond a bachelor's degree, and may include as many as 24 hours credit from a prior master's degree. Doctoral candidates must pass a qualifying exam during their first year in residence to assess their general background so that a meaningful program of study can be constructed. The usual doctoral program involves courses within and outside the department, and researching the dissertation topic prior to taking the comprehensive examination by the end of the second year. The results of the dissertation research are presented to the faculty and graduate students when the student has completed the project.

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Admission Contact Information

Dr. Robert Bauer (bauerr@missouri.edu), director of graduate studies

Admission Criteria

- Fall deadline: none set, but February 15 for guaranteed consideration for departmental financial aid
- Minimum TOEFL score: 530/71 (paper/internet), or IELTS 5.5

Our quantitative assessment of applicants uses a combination of GPA for the last 60 hours and the student's GRE verbal, quantitative and analytical writing scores. We have a formula that weights the GPA and total GRE scores equally. Applicants with a GPA less than 3.0 may be considered, but their acceptance would require very strong GRE scores or exceptional circumstances.

Required Application Materials

To the Graduate School:

- All required Graduate School documents (we encourage applicants to submitted applications through our online system, but hard-copy application forms are also available as PDF files).

To the Geological Sciences Program:

- Departmental application form
- 3 letters of recommendation (use provided form, or these can be submitted through the Graduate School's online application system)
- Personal statement (can also be uploaded into Graduate School application online)
- GRE scores

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Areas of Specialization

The areas of specialization are biogeochemistry, clay mineralogy, aqueous and isotope geochemistry, geophysics, hydrogeology, igneous petrology, metamorphic petrology, micropaleontology, ore deposits, invertebrate paleontology, sedimentation, stratigraphy, structural

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geology, tectonics, paleoclimatology and geomicrobiology.

Facilities and Resources
Adequate space and excellent facilities are available for research in the Geological Sciences Building, which also houses an excellent geology library. Modern and sophisticated equipment is available for supervised student use in many fields. The Geology Field Camp is in the Wind River Mountains near Lander, Wyoming. See the Department web site (http://geology.missouri.edu/index.html).

Courses

See Geological Sciences (GEOL) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

German Master of Arts

Contact Information

College of Arts and Science
451 Strickland Hall
573-882-4328
http://german.missouri.edu/degprogs/germangradstudies.html

About the German MA Program

The German and Russian Studies Department offers BA and MA degrees in two cultures and languages of critical significance in the world today - German and Russian. The German program prepares students for admission to PhD programs and for professional language careers in a number of fields. Courses in language, literature, teaching techniques and skills, seminars in various specialized aspects of German studies, and directed study and research provide candidates with opportunities to acquire a comprehensive background in German studies. Teaching assistants receive training in pedagogy.

Resources and Facilities

Resources include extensive library holdings in German literature, cultural studies, and teaching methodology, and an electronically equipped audiovisual laboratory for language training.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

German Faculty

Roger Cook
professor of German, PhD, University of California-Berkeley.

Stefani Engelstein
associate professor of German, PhD, University of Chicago.

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Monika Fischer
associate teaching professor of German, PhD, University of Oregon.

Sean Franzel
assistant professor of German, PhD, Cornell University

Sean Ireton
associate professor of German, PhD, University of Washington.

Kristin Kopp
assistant professor of German, PhD, University of California-Berkeley.

Brad Prager
associate professor of German, PhD, Cornell University.

Carsten Strathausen
associate professor of German, PhD, University of Oregon.

Application and Admission Information

Admission Contact Information

Kristin Kopp
koppkr@missouri.edu
218A Strickland
Columbia, MO 65211
573-882-3367

Admission Criteria

- Fall deadline: March 1
- Spring deadline: August 1
- Minimum TOEFL score: 500 (paper)
- Minimum GPA: 3.0
- Undergraduate major in German or equivalent
- Applications received by February 1 receive first consideration

Applications to begin Spring semester are not encouraged. Assistantships are typically not available for graduate students beginning Spring semester. The department reserves the right to evaluate the work presented for admission and to determine how the student may make up for background deficiencies.

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Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Program:

- Departmental application
- 3 letters of recommendation

Degree Requirements

Students must complete a minimum of 30 hours of graduate-level courses with a GPA of B or higher. No fewer than 24 hours are to be earned in German courses at the 7000 or 8000 level and at least 15 hours must be taken in German courses at the 8000 level. A thesis, with a maximum of 6 hours of credit, or a critical essay, with a maximum of 3 hours credit, is optional. Courses taken outside the department must complement the student's plan of study and require the approval of the departmental adviser. No languages other than German and English is required.

Information regarding specific course requirements can be obtained by writing to the director of graduate studies.

Comprehensive Examinations

Candidates for the MA degree must pass comprehensive written and oral final examinations based on coursework and the departmental reading list.

Courses

See GERMAN (GERMAN) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Gerontology Graduate Minor

M239 Medical Sciences Building
(573) 882-4098

The graduate minor in gerontology, available for both master's and doctoral degrees, consists of nine to 15 hours of aging-related courses approved as a graduate minor by the student's department/discipline. The MU Interdisciplinary Center on Aging provides assistance to students and their advisers in determining appropriate courses.

For information concerning curriculum offerings and participating faculty, visit http://aging.missouri.edu or contact David Oliver at (573) 882-4098 or oliverd@missouri.edu.

Graduate School Courses

Beyond its administrative functions, the MU Graduate School is also an academic unit. The following general courses are offered by the Graduate School; many are available as part the Preparing Future Faculty program.

GRAD 7010
Preparing To Be A Graduate Teaching Assistant

GRAD 9001
Topics in Graduate School

GRAD 9010
Preparing Future Faculty I

GRAD 9020
Preparing Future Faculty II

GRAD 9030
Teaching with Technology-Strategies for Your Online Classroom

Courses

See complete descriptions under GRADUATE SCHOOL (GRAD) in the myZou online system.

For additional information, please contact the Graduate School at 573-882-631 or 800-877-6312.

END OF GRADUATE SCHOOL COURSES DESCRIPTION

Health Management & Informatics Graduate Programs

Contact Information

School of Medicine
CE 707 Clinical Support and Education Building, DC006.00
One Hospital Drive
573-884-0698
http://www.hmi.missouri.edu/

About Health Management and Informatics

The HMI Department develops, translates, and disseminates knowledge innovations and evidence-based solutions to improve health management and informatics performance in complex health systems to advance the health of Missouri's communities, the nation, and international partners by:

- Creating a culture of collaborative relationships in research, education, and service to generate innovative ideas and solutions;
- Providing professional health management and informatics education and fostering lifelong learning;
- Delivering technical assistance and consultation by partnering with health, human service, and policy-making organizations; and
- Developing innovative commercial products and services for health- and education-related applications.

Degrees Offered

- Master of Health Administration
- Master of Science in Health Informatics
- Doctor of Philosophy in Health Informatics

Joint Degrees: The MHA can be jointly pursued with the following master's degrees: MBA, MPA, MS in industrial engineering; and the following professional degree: JD.

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Health Management & Informatics Faculty

Grant T. Savage
professor and chair, PhD, Ohio State University. Health care management, stakeholder and strategic management, conflict management and negotiation.

Patricia E. Alafaireet
clinical instructor and director of applied health informatics, MHA, University of Missouri. Applied health informatics, graphical user interface (GUI) for physician use, decision support.

Robert Bonney
adjunct professor, JD, MHA, University of Missouri. Managed care, negotiation.

Kenneth D. Bopp
clinical professor and director of HMI Group, PhD, University of Missouri. Quality management, strategic planning, marketing.

Suzanne A. Boren
assistant professor and director of graduate studies, health informatics doctoral program, PhD, University of Missouri. Consumer informatics, health care quality, evidenced-based medicine, patient safety, research methods.

Gordon D. Brown
professor, PhD, University of Iowa. Managed care, organizational behavior and theory.

Cathy Bryan
adjunct assistant professor, RN, Baylor University, MHA, University of Missouri. Clinical decision support.

J. Wade Davis
assistant professor, PhD, University of Missouri. Biostatistics, statistical bioinformatics, wavelets, pattern recognition.

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Robert A. DeGraaff
clinical assistant professor and director of graduate studies, PhD, MBA, Wharton School, University of Pennsylvania. Health policy; development and value of technology.

David A. Fleming
clinical professor and director of center for health ethics, MD, University of Missouri. Health ethics, internal medicine.

Yang Gong
assistant professor, PhD, University of Texas Health Science Center, MD, China Medical University. Human-computer interaction, information storage and retrieval, medical errors, subject representation.

Andrew Grant
adjunct professor, MD, Birmingham University, PhD, Oxford University. Health informatics.

Lanis L. Hicks
professor and associate chair, PhD, University of Missouri. Health economics, rural health, telemedicine, nursing home quality.

Jeannette Jackson-Thompson
research associate professor and operations director, Missouri Cancer Registry, PhD, MSPH, University of Missouri. Health promotion, disease prevention, Missouri Cancer Registry.

Naresh Khatri
associate professor, PhD, State University of New York at Buffalo. Strategic human resources, organization theory.

Ken Lobenstein
adjunct instructor, JD, University of Oregon. Information technology and security.

James Marzolf
adjunct assistant professor, MD, George Washington University. Epidemiology.

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Wilbert E. Meyer
clinical instructor and associate director, HMI Group, MHA, Central Michigan University. Rural health services.

David E. Moxley
clinical instructor, associate director of Executive MHA and HI Programs, and director of educational technologies, MLS, University of Missouri. Library and information science.

Youngju Pak
assistant professor, PhD, State University of New York at Buffalo. Biostatistics.

Kalyan S. Pasupathy
assistant professor, PhD, Virginia Polytechnic Institute and State University. Healthcare engineering.

Edmund Pellegrino
adjunct professor, MD, New York University. Health ethics.

Gregory F. Petroski
research assistant professor, PhD, University of Missouri. Psychometric methods, differential test functioning, applications of Item Response Theory.

Winfred G. Phillips
clinical assistant professor, PhD, Yale University. Health care management information systems, computer systems development.

Mihail Popescu
assistant professor, PhD, University of Missouri. Ontological data mining, fuzzy logic in bioinformatics and medical informatics.

Cheryl Rathert
assistant professor, PhD, University of Nebraska-Lincoln. Person-centered work environments, management information systems, organizational psychology.

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Jeremiah H. Sable
Adjunct Professor, MD, Case Western Reserve University. Information architecture, clinical vocabularies.

Gerald M. Sill
clinical professor, JD, University of Missouri. Health care law.

Leo Van der Reis
adjunct professor, MD, University of Chicago. Health system reform, international comparisons.

Douglas Wakefield
professor and director of the Center for Healthcare Quality, PhD, University of Iowa. Management development, quality, job satisfaction and turnover.

William Wells
clinical assistant professor and director, Health and Behavioral Risk Research Center, PhD, MHA, University of Missouri. Health and behavioral risk.

Illhoi Yoo
assistant professor, PhD, Drexel University. Text mining, biomedical informatics, bioinformatics, data mining, information retrieval, digital library.

Master of Health Administration

Admission Contact Information

Matthew L. Kearney, MA (kearneym@health.missouri.edu)
CE 707 Clinical Support and Education Building; DC006.00
One Hospital Drive
Columbia, MO 65212
573-884-0698

Application and Admission Information

Admission Criteria

- Deadline for Fall entrance: Rolling
- A minimum of a baccalaureate degree from an accredited institution
- Minimum TOEFL score: 603/100 (paper/internet)

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- Minimum GRE score: 50th percentile; or minimum GMAT score: 50th percentile
- Undergraduate GPA: 3.0 during the last 60 hours of undergraduate course work and any subsequent graduate course work

Students who wish to dually enroll in the MBA program should submit GMAT scores. The Health Services Management Program recruits and accepts qualified applicants regardless of race, sex, age, physical ability, or national origin.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the HMI Program (CE 707 Clinical Support and Edu. Bldg., DC006.00; Columbia, MO 65212):

- 3 letters of recommendation
- GRE or GMAT scores
- Current résumé or curriculum vitae
- Personal essay
- Official transcripts
- TOEFL report (international applicants only)

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Joint Degrees

The MHA can be jointly pursued with the following degree programs: MS in health informatics, MBA, MPA, MS in industrial engineering, JD.

About the Program

The Graduate Program in Health Services Management prepares professionals to meet critical and complex challenges in leadership and improvement in organizations and systems throughout the health industry. The program provides recognized national and global leadership in health management education.

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The program is competency-based and distinctively equips graduates for success through (a) providing solid grounding in professional and operational knowledge and skills, (b) integrating health informatics throughout the health services management curriculum, and (c) incorporating overarching complex systems context and analytical approaches.

The residential and executive master's degrees launch and advance patient-centered, improvement-oriented, financially-responsible, and ethically-grounded careers in evidence-based health services management.

The program admits diverse cohorts of students from Missouri, other states, and other nations. Through the admissions process, the program looks for learners with strong academic records, maturity, motivation, leadership capabilities, and career potential. Primary post-graduation placement organizations include health systems, hospitals, academic medical centers, physician group practices, surgery centers, information technology companies, consulting firms, government agencies, insurance entities, and other points of health services delivery.

Whereas the residential master's degree format is a traditional on-campus residential program, the executive master's degree is offered in a hybrid model featuring both on-campus and distance learning. In both formats, emphasis is on fostering an individualized and collaborative culture of learning, mentoring, and professional development among students, faculty, staff, alumni, and other practitioners in order to prepare and enable transformational leadership in improving patient care quality, safety, value, and overall level of population health.

Implemented in 1965, the program is a member of the Association of University Programs in Health Administration (AUPHA) and has been accredited since 1968 by the Commission on Accreditation of Healthcare Management Education (CAHME), formerly Accrediting Commission on Education for Health Services Administration (ACEHSA).

MHA Curriculum

The basic MHA curriculum is designed for a range of educational backgrounds and provides the knowledge and skills necessary to

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function effectively as a healthcare executive. The curriculum includes competency areas such as health systems operations, organization theory, information management, financial management, strategic planning and marketing, human resource management, health economics, managerial epidemiology, leadership, and ethics. By combining basic and advanced course work with an internship and executive management study (an applied management study that replaces a thesis), the student may develop expertise in a focused area. Professional elective course selection is a mutual decision between the student and adviser, and in all cases, the intent is to tailor the degree program to the student's interests. The goal of the graduate program in health services management is to prepare professionals for leadership roles in health administration. Students develop an excellent applied knowledge in such areas as clinical decision support systems, risk assessment and management, clinical outcomes assessment, managing interdisciplinary teams and integrated health systems.

Degree Requirements

The MHA curriculum includes 48 hours of health services management course work and six hours of professional electives (as well as three foundation courses—fundamentals of microeconomics, accounting, and finance—that must be waived or completed). To graduate, a student must maintain a GPA of 3.0 (A=4.0) or better.

Plan of Study

In the first year, the graduate program develops the theoretical background and skills necessary for analyzing complex health system problems and for thinking innovatively. After completion of the first two semesters students serve a 12-week internship under the guidance of a qualified preceptor in an approved healthcare organization. This enables students to gain experience in the field, encounter issues and problems in day-to-day operations, and apply the concepts and skills obtained during the first year of course work. Clinical and field experience sites are provided by healthcare organizations throughout the country. During the internship, students generally are paid a monthly stipend. The second year builds on the conceptual, theoretical, and experiential base of the first year, providing increased flexibility for concentration in various administrative and planning areas and allowing students to pursue more independent learning. Emphasis is placed on the development of an individual with the behavioral and decision-making

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skills necessary for a leadership position in a changing healthcare environment. Additionally, all students are required to complete successfully an oral examination that enables faculty to evaluate the student's competency in health management.

Executive MHA Program
In addition to the traditional degree program, an alternative format program is offered for healthcare professionals who have significant clinical or administrative experience in health care. The executive MHA program, which begins in January, combines monthly on-campus weekend sessions, independent study, and online interaction in an innovative two-year course of study. For additional information about the Executive MHA Program, please call the coordinator of student recruitment at (573) 884-0698, or visit http://www.hmi.missouri.edu.

Master of Science in Health Informatics

Admission Contact Information
Matthew L. Kearney, MA (kearneym@health.missouri.edu)
CE 707 Clinical Support and Education Building, DC006.00
One Hospital Drive
Columbia, MO 65212
573-884-0698

Admission Criteria
- Deadline for Fall entrance: Rolling
- A minimum of a baccalaureate degree from an accredited institution
- Minimum TOEFL score: 603/100 (paper/internet)
- Minimum GRE score: 50th percentile; or minimum GMAT score: 50th percentile
- Undergraduate GPA: 3.0 during the last 60 hours of undergraduate course work and any subsequent graduate course work

Required Application Materials
To the Graduate School:
- All required Graduate School documents

To the HMI Program (CE 707 Clinical Support & Edu. Bldg, DC006.00; Columbia, MO 65212):
- 3 letters of recommendation

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- GRE or GMAT scores
- Current résumé or curriculum vitae
- Personal essay
- Official transcripts
- TOEFL report (international applicants only)

Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

About the Master of Science in Health Informatics

The program prepares professionals to meet critical and complex challenges in applying information technology within the health industry. It provides recognized national and global leadership in health informatics education.

The residential master's degree prepares students for careers in developing and evaluating clinical information systems, data and knowledge management, decision support, and doctoral study in health informatics. The executive master's degree advances the careers of physicians, managers, nurses, information system designers, consultants, entrepreneurs, and others committed to the application of information technology for improving the quality, safety, and efficiency of health services.

The program admits diverse cohorts of students from Missouri, other states, and other nations. Through the admissions process, the program looks for learners with strong academic records, maturity, motivation, leadership capabilities, and career potential. Primary post-graduation placements include doctoral programs, health systems, hospitals, academic medical centers, physician group practices, outpatient facilities, information technology companies, consulting firms, government agencies, insurance entities, and other points of health services delivery.

Whereas the residential master's degree format is a traditional on-campus residential program, the executive master's degree is

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offered in a hybrid model featuring both on-campus and distance learning. In both formats, emphasis is on fostering an individualized and collaborative culture of learning, mentoring, and professional development among students, faculty, staff, alumni, and other practitioners in order to prepare and enable transformational leadership in improving patient care quality, safety, value, and overall level of population health.

Residential MS(HI) Program

The residential MS in Health Informatics curriculum includes 9 credit hours of foundation courses that must be waived or completed and 30 credit hours of health informatics course work. The health informatics curriculum is comprised of (a) 3 credit hours of health informatics introduction, (b) 15 credit hours of core courses, (c) selected concentration course(s) of at least 3 credit hours, and (d) 9 credit hours of research courses. The curriculum integrates learning across computer science, health informatics, and health services management. The program also develops students' research interests in health informatics and encourages those with excellent academic performance to pursue the Ph.D. degree. To graduate, a student must maintain a GPA of 3.0 (A=4.0) or better.

Individuals with three or more years of professional experience are encouraged to apply to the Executive HI Program.

Executive MS(HI) Program

In addition to the traditional degree program, an alternative format program is offered for professionals who have significant experience in health informatics. The executive MS program in Health Informatics, which begins in January, combines 3 on-campus weekend sessions per semester with independent study and online interaction in an innovative 2-year course of study. For additional information about the Executive MS Health Informatics Program, please call the coordinator of student recruitment at (573) 884-0698, or visit http://muii.missouri.edu/.

Courses

See Health Management & Informatics (MHI) graduate courses in the myZou online system.

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Doctor of Philosophy in Health Informatics

The PhD in Health Informatics at the University of Missouri prepares individuals for research and scholarly careers in the application of information technology to health systems. Demand is high for individuals with skills in health and clinical informatics and graduates will have the ability to become independent investigators on faculties in informatics, health services management, medicine, nursing and other health professions, or in commercial and public research institutions.

The doctoral program draws on the considerable resources and strengths of the Department of Health Management and Informatics and other academic programs at the University of Missouri to offer a strong and flexible program of study. The program is designed for students who wish to become future researchers and thought leaders in health systems being rapidly transformed through information technology.

The Ph.D. program has the following broad emphasis areas:

- Health Systems Informatics
- Clinical Informatics
- Consumer Health Informatics
- Public Health Informatics

Specific core research areas include:

- Program evaluation
- Information architecture
- Decision support and knowledge systems
- Biomedical data/text mining

Building on a tradition of outstanding informatics education and research at the University of Missouri, the doctoral program is a joint program of the Departments of Health Management & Informatics, Computer Science, Industrial & Manufacturing Systems Engineering, and the Bond Life Sciences Center that comprise the University of Missouri Informatics Institute (MUII). The Institute offers concentrations in health informatics and bioinformatics. Each emphasis area stresses skill sets and research appropriate to the subfield within the broad area of informatics.

A core curriculum provides all students with a foundation of knowledge and tools in computer sciences, statistics and health systems, after

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which they complete further coursework in their chosen emphasis area. The integrated program assures broad exposure to the field and fosters new insights and innovative research concepts. Students are accepted into the program with diverse backgrounds and varying degrees of experience.

For current information about the PhD in Health Informatics please visit the website at http://www.hmi.missouri.edu.

Courses

See Health Management & Informatics (HMI) graduate courses in the myZou online system

END OF PROGRAM DESCRIPTION

History Graduate Programs

Contact Information

College of Arts and Science
101 Read Hall
573-882-2481
http://history.missouri.edu/

About the Program

By any measure one might choose, the History Department at the University of Missouri is an outstanding one. Our faculty has compiled a distinguished record of scholarship, receiving major awards to support their research from the National Endowment for the Humanities, the National Science Foundation, the John Simon Guggenheim Foundation and many other sponsors of cutting edge scholarship. Their books have won prizes from the American Historical Association, the Organization of American Historians and other national and regional scholarly organizations.

The department's teaching record is every bit as distinguished as its record of scholarly accomplishment. Graduate students work closely with professors in advanced seminars and write theses and dissertations on a wide variety of topics. The teaching opportunities the department offers graduate students prepare them well for dealing with the difficult job market for new history PhDs. Over the last ten years, University of Missouri history PhDs have found positions at more than forty different colleges and universities across the United States.

Areas of Study

Lecture courses, seminars and directed research projects are available on the histories of Western Europe, Russia, Great Britain, South Asia, East Asia, Latin America and the United States. While students are expected to get specialized training in the fields of their choice, they are also urged to develop a broad historical background.

Facilities and Resources

Ellis Library has substantial research materials in all fields of graduate study, including an unusual collection of more than 5,000 pamphlets

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on 17th- and 18th-century British history and 18th- and 19th-century British and continental journals, including publications of all the major academies. The Health Sciences Library has excellent publications on the history of medicine. An additional resource is the Western Historical Manuscript Collection, a unique repository of material for regional studies in political, social and economic history. The State Historical Society of Missouri has an outstanding library of finding aids and primary and secondary works dealing with Missouri history. The graduate program also has available the resources of the Truman Library at Independence, Missouri.

Internal Funding
Applicants may compete for Graduate School fellowships for entering students. Graduate School fellowships require departmental nomination. Interested students should consult with the director of graduate studies for further details. The department provides qualified students the opportunity to gain college-level teaching experience as teaching assistants who conduct discussion sections in American and European history. Pending administrative approval and availability of funding, they earn at least $11,491 an academic year and carry nine semester hours. Each appointment is subject to annual review and may be renewed up to a maximum of six years.

History Faculty

Russell Zguta
chair, professor, PhD, The Pennsylvania State University. Medieval Russia.

John L. Bullion
professor, PhD, University of Texas-Austin. American colonial and political history.

Robert M. Collins
professor and Byler Chair in Social and Behavior Sciences, PhD, Johns Hopkins University. Recent United States history.

Wilma King
professor and Strickland Chair, PhD, University of Indiana. African-American history.

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Kerby A. Miller
Curators' Professor, PhD, University of California-Berkeley. American immigration, modern Irish history.

A. Mark Smith
Curators' Professor, PhD, University of Wisconsin-Madison. Medieval Europe, history of science.

Jonathan Sperber
Curators' Professor, PhD, University of Chicago. Modern Germany.

Steven Watts
professor, PhD, University of Missouri. American cultural and intellectual history.

Robert E. Weems Jr.
Middlebush Professor, PhD, University of Wisconsin-Madison. African-American history.

LeeAnn Whites
professor, PhD, University of California-Irvine. Civil War and reconstruction, women, 19th-century South.

John H. Wigger
professor, PhD, Notre Dame University. United States social and cultural history to 1865.

Ian Worthington
Byler Distinguished Professor, PhD, Monash University, Australia. Ancient Greece.

Richard Bienvenu
professor emeritus, PhD, Harvard University. European intellectual history.

Winfield J. Burggraaff
professor emeritus, PhD, University of New Mexico. Latin American history.

Susan Flader
professor emeritus, PhD, Stanford University. American West, American environment.

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Abdullahi A. Ibrahim
professor emeritus, PhD, Indiana University. Africa, Islamic history.

Charles G. Nauert Jr.
professor emeritus, PhD, University of Illinois. Renaissance, Reformation.

Arvarh E. Strickland
professor emeritus, PhD, University of Illinois. African-American history.

Mark M. Carroll
associate professor, PhD, University of Houston. U.S. South.

John Frymire
associate professor, PhD, University of Arizona. Renaissance and Reformation.

Lois L. Huneycutt
director of graduate studies, associate professor, PhD, University of California-Santa Barbara. Medieval Europe, women.

Theodore Koditschek
associate professor, PhD, Princeton University. Modern British social history.

Lawrence Okamura
director of undergraduate studies, associate professor, PhD, University of Michigan-Ann Arbor. Ancient, late antiquity, Roman frontier.

Jeffrey L. Pasley
associate professor, PhD, Harvard University. Early United States.

Linda Reeder
associate professor, PhD, Rutgers University. Modern European history, women.

Catherine Rymph
associate professor, PhD, University of Iowa. Recent United States.

Michael Bednar
assistant professor, PhD, University of Texas-Austin. South Asia.

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Jerritt Frank
assistant professor, PhD, University of Kansas. U.S. environmental history.

Ilyana Karthas
assistant professor, PhD, Brown University. France, cultural and intellectual history.

Michelle Morris
assistant professor, PhD, Harvard University. American colonial, women, material culture.

Soon Keong Ong
assistant professor, PhD, Cornell University. East Asia.

Robert L. Smale
assistant professor, PhD, University of Texas-Austin. Latin American.

Master of Arts in History

Admission Contact Information

Nancy Taube (tauben@missouri.edu)
101 Read Hall; Columbia, MO 65211
573-882-9461

Admission Criteria

- Fall deadline: January 14
- Minimum TOEFL score: 500 (paper)
- Minimum GPA: 3.0 in last 60 hours
- BA or BS degree
- GPA of 3.3 in undergraduate history courses, and at least 18 hours in history

Candidates who lack the necessary undergraduate hours in history must take graduate-level classes in history to remedy that deficiency before they can be considered for admission. They should consult with the director of graduate studies about appropriate classes. Graduate School regulations prohibit a non-degree student from taking more than twelve hours of course work.

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Candidates must achieve a grade point average in these classes of at least 3.3 on a 4.0 scale to be considered for admission. A 3.3 GPA or higher does not guarantee admission. Course work taken as a non-degree student to remedy a deficiency in prerequisites ordinarily will not count toward the MA degree.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the History Program:

- GRE scores
- Departmental application
- Official transcripts
- 3 letters of recommendation
- Short essay explaining goals and expectations in graduate study, including the fields in which the student plans to specialize
- Substantial writing sample, such as a final research paper from a course

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details. In this department, applications for financial aid must be filed by mid-January and will not be considered after that date. Announcements of awards are made no later than April 1. Applicants may compete for Graduate School fellowships for entering students. Graduate School fellowships require departmental nomination. Interested students should consult with the director of graduate studies for further details.

The department provides qualified students the opportunity to gain college-level teaching experience as graders who grade exams and papers in American and European history. Pending administrative approval and availability of funding, they earn at least $5,745 an academic year and carry nine semester hours.

Each appointment is subject to annual review and may be renewed up to a maximum of two years.

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Requirements for the Degree Residency
A minimum of two semesters of full-time enrollment (9 hours each semester) or three semesters of part-time enrollment (6 hours each semester). Enrollment in all graduate courses requires the consent of the student's adviser and the instructor(s) of the class.

Hours
Thirty semester hours of graduate credit are required by the Graduate School for the MA degree. The Graduate School also mandates that at least fifteen of these hours be in courses numbered 8000 or above, and will not count more than twelve hours of individually directed studies toward the thirty hours necessary to earn the degree. The department requires that at least twenty of these hours be in history. For students of United States history, at least fifteen hours must be in formally constituted US history courses. For students in the non-United States history program, at least twelve hours must be in formally constituted non-US history courses. Independently directed work does not count toward fulfilling this requirement in either category.

Required Courses
A readings seminar in every semester in which as many as nine credit hours are carried, unless the student is granted an exemption by the director of graduate studies. Every masters student must take History 8480, Historiography, unless excused by the director of graduate studies. History 8480 is offered every Spring Semester.

Every student who is a non-thesis candidate must complete at least two research seminars before receiving the MA degree. No master's candidates in US or non-US history are required by the department to demonstrate reading proficiency in any foreign languages or to develop research skills before receiving the MA degree. Individual advisers, however, can require MA candidates to become proficient in reading foreign languages and/or develop specific research skills if they determine such knowledge is essential for the successful completion of a student's masters program. As soon as any such determination is made, students will be informed by their advisers. The advisers will also discuss with them processes for achieving and demonstrating those proficiencies.

Masters candidates in Ancient History must demonstrate proficiency in at least one ancient language (Greek or Latin) and at least one modern

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language (generally, either French or German) before they begin work on their theses, if they choose that alternative, or before they take the non-thesis MA examination, if they are seeking a terminal masters degree. These students should also be aware that ancient history graduate courses can include readings in Greek and Latin. For directions on how to demonstrate proficiency in these ancient and modern languages, students should talk with their advisers and obtain a written description of this process from them.

Special Note: No student will receive graduate credit for any course in which s/he earns a grade below B. The grade of C in a graduate class is the equivalent of an F in an undergraduate course.

Satisfactory Progress and Annual Review
At the beginning of every Spring semester, students must complete a "Progress Report" on the Graduate School's Graduate Student Progress System (sometimes referred to as "online assessment"). This report will be read by the student's faculty adviser, who will then submit an "Adviser Response." In addition, the student and adviser should meet to discuss the student's progress, confirm expectations for the coming year, and address any concerns either may have regarding the report.

This is an extremely important process for two reasons. First, the adviser determines whether the student is making satisfactory progress toward a degree. If s/he is not, the adviser informs the student what needs to be done to rectify the situation. The student then usually has a year to return to making satisfactory progress. Failure to do so may result in loss of financial aid or dismissal from the program. Second, if the student is making satisfactory progress, the adviser and s/he decide together on what reasonable goals are for the next twelve months. These goals will define "satisfactory progress" at the next assessment meeting.

Appeals
The student may appeal any assessment to the director of graduate studies. If not satisfied, s/he may seek the remedies described in the Graduate School catalog.

Effect of Progress Report Completion on Funding
Completion of the Graduate Student Progress System forms by both student (Progress Report) and faculty (Adviser Response) is mandatory

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to maintain eligibility for any form of financial aid from the department. Receipt of financial aid requires confirmation by a student's adviser that s/he is making satisfactory progress. No student in the program who applies for or who is seeking renewal of financial aid will be eligible for aid without a complete and up-to-date Graduate Student Progress System Report on file.

Plans for MA Degrees: Thesis plan

All students who wish to apply for admission to doctoral programs in history either at the University of Missouri or at other institutions must write a thesis. A thesis involves an original and extended analysis of an historical issue that requires substantial research. The topic of the thesis must be approved in advance by the student's faculty director and the thesis committee, which is composed of the director, at least one other member of the history faculty, and one faculty member from outside the department.

Graduate School regulations require that there be an outside faculty person on each thesis committee. At the discretion of the director, additional faculty members may be added to the committee. The appropriate forms, signed by the adviser and the director of graduate studies, will be submitted to the Graduate School.

Students will take History 8090, Thesis Research, during those semesters they are actually engaged in writing their thesis. N.B.: The Graduate School only permits six hours of History 8090 to count toward the 30 hours necessary to earn a masters degree. Students should also note that hours earned in History 8090 do count toward the maximum of 12 hours of independent study, i.e., History 8085 (Problems), History 8089 (Research), and History 8090 (Thesis Research), the Graduate School will accept as credit for this degree.

Plans for MA Degrees: Non-thesis plan

Students may earn a master's degree without writing a thesis. A non-thesis MA is a terminal degree. Those who receive it will not be considered for admission to the doctoral program. These students must successfully complete two research seminars in history. These seminars will count toward the thirty hours required for an MA degree. One of the seminar papers must be submitted to the department to fulfill the Graduate School requirement for a substantial effort reflecting creativity or originality.

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Examination for the MA degree: For Thesis Plan
The student must defend her/his thesis before a committee of at least three faculty members, one of whom must be the thesis director. Another must be from a department other than History. The committee is appointed by the Dean of the Graduate School upon recommendation from the Department of History. The examining committee decides:

1. whether to recommend the awarding of the MA degree to the student
2. for prospective doctoral candidates, whether the student shall be permitted to enter the doctoral program.

This latter action constitutes a decision on the qualifying examination required in the doctoral program. Afterwards, the appropriate form(s) will be signed by the adviser, committee members, and the director of graduate studies, then sent to the Graduate School.

Examination for the MA degree: For Non-Thesis Plan
A comprehensive oral examination covering all work for the degree will be conducted by a committee of the adviser and at least two other faculty members, one of whom may be from a department other than history. The examining committee decides whether to recommend the awarding of the MA degree. Afterwards, the appropriate form(s) will be signed by the adviser, committee members, and the director of graduate studies, then sent to the Graduate School.

Graduate School Deadlines for receipt of the MA degree
Students must meet Graduate School deadlines for the awarding of degrees and the submission of theses. The final form of the thesis must be in conformity with the Graduate School requirements.

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Doctorate in History

Admission Contact Information
Nancy Taube (tauben@missouri.edu)
101 Read Hall; Columbia, MO 65211
573-882-9461

Admission Criteria

- Fall deadline: January 14
- Minimum TOEFL score: 500 (paper)
- MA in history strongly preferred
- Quality of master's thesis or research seminar paper submission

Students who do not meet one or more of these criteria may enroll as non-degree graduate students. Contact the director of graduate studies for further details. All admissions of doctoral candidates who did not receive the MA degree from the department are provisional. These students must pass a qualifying examination. See below for information about the qualifying examination.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the History Program:

- GRE scores
- Departmental application
- Official transcripts
- 3 letters of recommendation
- Short essay explaining goals and expectations in graduate study, including the fields in which the student plans to specialize
- Substantial writing sample, such as a final research paper from a course

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

In this department, applications for financial aid must be filed by mid-

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January and will not be considered after that date. Announcements of awards are made no later than April 1 each year. Applicants may compete for Graduate School fellowships for entering students. Graduate School fellowships require departmental nomination. Interested students should consult with the director of graduate studies for further details.

The department provides qualified students the opportunity to gain college-level teaching experience as teaching assistants who conduct discussion sections in American and European history. Pending administrative approval and availability of funding, they earn at least $11,491 an academic year and carry nine semester hours. Each appointment is subject to annual review and may be renewed up to a maximum of six years.

Qualifying Examination
To be admitted to candidacy for a PhD in history, a student must have earned an MA in history or a related discipline and have passed a qualifying examination.

Students with an MA from the University of Missouri
Students earning their MA in history at this university may, with the approval of their advisory committee, combine their qualifying examination with their MA thesis defense. Other students must take their qualifying examination no later than the beginning of their third semester in the graduate program at the University of Missouri-Columbia.

Students Who Earned Degrees at Other Institution
All admissions of doctoral candidates who did not receive the MA degree from the department are provisional. These students must pass a qualifying examination no later than the beginning of their third semester of residence at MU. The exam will focus on a research paper the student wrote at MU.

About the Exam
The examining committee will be composed of the student's adviser and at least two other history faculty members. During the consideration of prospective students, the committee on graduate admissions will consult closely with faculty best suited to advise them.

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The basis for the examination will be a substantial research-based seminar paper written here. The exam will be oral, approximately one hour in length; the examiners will include the student's adviser and at least two other members of the department. It is designed to ascertain the candidate's intellectual capacity, aptitude, and preparation for PhD level work in history.

The committee reserves the right to reject otherwise qualified students if:

1. this department cannot provide the applicant with an adequate program in his/her area of interest
2. no faculty member is willing to supervise his/her work

PhD Program Overview

The PhD program in history at the University of Missouri-Columbia is governed by a number of rules, regulations, and expectations. What follows is an explanation of these elements of the program.

Adviser and Advisory Committee

A student will meet with his/her adviser no later than the semester following passage of the qualifying examination for students who earn their MA in history at the University of Missouri and prior to the qualifying examination for other students. The adviser and student together will plan the student's class work up to the comprehensive exams. They will also choose other members of the student's doctoral committee. That committee will ordinarily consist of the adviser, three members of the history department who are on the graduate faculty, and one graduate faculty member from outside the department. The advisory committee must be approved by the dean of the Graduate School.

Developing a PhD Plan of Study

The committee will meet formally with the student to help the student to develop a major field, two broad historical fields, a historical field outside his/her area of major emphasis, and one field in a discipline other than history for the comprehensive examination. How s/he will meet the foreign language and/or historical research technique requirement (see below) will be defined and approved by the adviser and the committee. Members of the advisory committee shall meet regularly with the student to ensure he/she is making satisfactory progress.

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PhD Degree Requirements

To obtain a PhD in history at the University of Missouri, a student must fulfill the following requirements:

- residency
- course work
- foreign language and/or historical/research technique
- comprehensive examination
- dissertation and oral defense

Residency

A minimum of two semesters of full-time enrollment (9 hours each semester) or three semesters of part-time enrollment (6 hours each semester). Enrollment in all graduate courses requires the consent of the student's adviser and the instructor(s) of the class.

Course Work

The minimum requirement for the PhD degree at the University of Missouri is 72 hours of graduate credit beyond the baccalaureate degree. A student's adviser and committee may require more. Customarily, students in history have more than 72 hours when they defend their dissertations. If a student has earned an MA degree at another institution, with the approval of her/his adviser and committee, s/he may receive up to 30 hours of credit toward the 72 necessary for the PhD. If a student took additional courses beyond his/her MA degree at another institution, with the approval of her/his adviser and committee, s/he may receive up to a maximum of six hours of credit toward the PhD.

Graduate School regulations forbid the awarding of more than six hours. Two-thirds of the courses taken by a PhD candidate within the department prior to the comprehensive examination must be at the 8000 or 9000 level. These may, and probably will, include History 8085 (Problems), History 8410 (Independent Readings PhD Exam), History 9089 (Research), but not History 9090 (Dissertation Research).

Every doctoral student who earned his /her masters degree at another institution must take History 8480, Historiography, unless excused by the director of graduate studies. History 8480 is offered every spring semester.

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Foreign languages and historical research techniques

PhD candidates must demonstrate abilities in foreign languages and/or historical research skills appropriate to the completion of a doctoral dissertation in their proposed field of research. There are four different ways a student may fulfill this requirement. Which one is chosen depends on the area of his/her research interest. The adviser and committee must approve the method for fulfilling this requirement.

PhD Emphasis Areas

Ancient History Emphasis

Candidates planning to write a doctoral dissertation in ancient history must demonstrate their competence in Greek and Latin, together with at least two modern languages (usually French and German).

For the ancient language, competence will be shown either by the successful completion of a translation examination designed by a history department faculty member with knowledge of the relevant language, or by the completion of upper-level courses in the department of classical studies, or by other such proof as the adviser and other members of the advisory committee deem appropriate.

Competence in the modern languages will be shown either by the successful completion of a translation examination designed by a history department faculty member with knowledge of the relevant language, or by passing the ETS language examination with a minimum score of 500, or by the successful completion of an upper level language course in any modern language department of the university.

European History Emphasis

Candidates planning to write a dissertation in European history must be competent in two foreign languages.

Competence may be demonstrated either by successful completion of a research paper, the sources for which are predominantly in the foreign language under consideration, or by successful completion of a translation examination designed by a history department faculty member with knowledge of the relevant language, or by passing an ETS language examination with a minimum score of 500. A candidate's advisory committee may also require him/her to show competence

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in historical research technique. An historical research technique is a specialized field of study which provides a student with additional skills for research. Quantitative methods/statistics or techniques of historical exhibition, museum work, and the analysis of material culture are some examples. Competence will be demonstrated by satisfactory completion of a substantial research paper or other historical project for which the technique is necessary.

Students who take foreign language courses should keep in mind that all classes below 7000 may not be taken for graduate credit and do not count toward the 9 hours per semester required for those receiving financial aid.

American History Emphasis
Candidates planning to write a dissertation in American history shall have a competent reading knowledge of one foreign language.

Competence in a foreign language shall be demonstrated in the ways described above for candidates in European history.

Asian or Latin History Emphasis
Candidates planning to write a dissertation in Asian or Latin American history shall demonstrate a competence in such languages as their advisory committee requires for their research. In addition, a candidate's advisory committee may require the candidate to demonstrate competence in an historical/research technique, as defined above in the American History section (3).

Preparation for the Comprehensive Examination
In the department of history, each doctoral student must prepare five fields for the comprehensive examinations. The selection of those fields and the faculty who will be the examiners in each should be begun by the doctoral candidate and her/his adviser during her/his first semester at MU. The adviser will help the student prepare for examination in her/his major field. This will cover significant historical themes and historiographical trends in the specific period and area of the student's prospective dissertation topic.

Two other members of the history faculty will help the student prepare for examinations in two chronological and/or geographical areas of

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historical study that are appropriate for his/her dissertation topic. A fourth member of the history faculty will prepare the student for an examination in a chronological, geographical, and/or thematic area of historical study that is not directly related to his/her dissertation topic. A fifth faculty member from a department other than history will prepare the student for examination in an outside field. This will cover the methodologies and research findings of another academic discipline.

Areas of Study and Dissertation Topics

What the student learns in this discipline should assist his/her understanding of and research on her/his dissertation topic. The student's choice of a discipline to work in for his/her outside field is potentially as wide as the number of programs and departments in the university. That choice is not confined merely to departments in the College of Arts and Science. The student must have his/her adviser's approval of the discipline and the outside faculty member. The Graduate School must approve these selections as well.

Within the department of history there are seven broad areas of historical study:

- US history to 1865 (including the colonial period)
- US history since 1865
- Ancient history
- European history from the fall of Rome through the Reformation
- European history since the Reformation
- Latin American history
- Asian history

The three history faculty who, together with the adviser, will help the student prepare for the comprehensive examinations, must each test him/her on material in a different broad area. Thus the student will be working on three different broad areas, plus the dissertation field. The three faculty members may, in consultation with the student, define the broad area as narrowly or as widely as they choose.

Documenting Exam Preparation

The adviser and the four other faculty members must explain how they want the student to prepare, what they want the student to master, and which criteria they will use to assess the examinations in their particular field. These explanations must be in writing, and copies of each placed

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in the student's permanent file.

Comprehensive Examination Requirement
Students may take a comprehensive examination only after fulfilling their residency, course work and foreign language and/or historical research technique requirements. It will be administered by a committee consisting of his/her adviser and four other faculty members, one from a discipline other than history. These should be the faculty members who helped the student prepare for the examinations. Sometimes it may be necessary to find substitutes. The director of graduate studies and the Graduate School must approve any substitutions, and new committee members must describe their expectations in writing for the student and for his/her permanent file.

Comprehensive Exams Processes
The comprehensive exams are given in two stages. The first is a series of at least three written exams. The second is an oral examination, which is conducted if the student passes the written portion. A report of the decision, signed by all members of the committee, must be sent to the Graduate School and the student no later than two weeks after the comprehensive exam is completed. One of the written exams must be in the major field; the committee will determine the subjects of the other exams, and their number.

Special Note: All members can require the student to write on their areas of expertise. Therefore the written examinations could cover all five areas.

All members of the committee will read the written exams and discuss them within two weeks after their completion. If they determine the student has not successfully completed the exam, they will inform him/her immediately and discuss the results. Failure ends the comprehensive exam at this point. The committee must provide the student with an outline in writing of the weaknesses and deficiencies of his/her work.

A copy of this must be placed in the student's permanent file. If at any time the student believes that parts of the exam are unclear, or the decision of the committee is incorrect, or the advice given by the committee is inadequate, s/he may send a written request for clarification and rectification to the committee. A copy of this request

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should be sent to the Graduate School as well. The committee must respond to this request in writing within two weeks and a copy must be filed with the department and the Graduate School.

At least 12 weeks must pass before a student who failed can take the comprehensive exams again.

If the committee determines that the student did satisfactory work on the written examinations, they will schedule an oral examination. This second stage of the comprehensive exams will cover all five fields. Each member of the committee will test the student. At the end of the oral examinations, the committee discusses the student's performance on each field and on the entire examination. This discussion includes both the written and the oral parts of the whole process. Then they vote pass, fail, or abstain on the student's total performance on the exam.

Criteria for Successful Completion of the Comprehensive Exam
To complete the comprehensive exams successfully, the student must receive a vote of pass from at least four of the five examiners. Should two or more votes be negative or abstentions, the committee follows the same procedure outlined above for failure to pass the written part. These students must repeat the entire examination, not just the fields failed, and not just the oral portion. If the candidate fails the second examination, the examining committee must enter on its report to the dean of the Graduate School a recommendation to prevent the student's further candidacy.

Dissertation and Oral Defense
Soon after successful completion of the comprehensive examination, the student and adviser will form a dissertation committee of five faculty members. One member of the committee must be from outside the department. The student shall develop with her/his adviser and committee a dissertation topic and a plan of research. S/he should keep in regular contact with the adviser. Together they shall decide when written work will be read by other members of the committee.

Travel Funding
When students begin work on their doctoral dissertations, they may apply for departmental fellowships and travel grants to assist their research and writing.

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Satisfactory Progress
The department requires PhD candidates to make satisfactory progress towards completion of their degree.

Annual Review
At the beginning of every Spring Semester, students must complete a "Progress Report" on the Graduate School's Graduate Student Progress System. This report will be read by the student's faculty adviser, who will then submit an "Adviser Response." In addition, the student and adviser should meet to discuss the student's progress, confirm expectations for the coming year, and address any concerns either may have regarding the report.

This is an extremely important process for two reasons. First, the adviser determines whether the student is making satisfactory progress toward a degree. If s/he is not, the adviser informs the student what needs to be done to rectify the situation. The student then usually has a year to return to making satisfactory progress.

Failure to do so may result in loss of financial aid or dismissal from the program. Second, if the student is making satisfactory progress, the adviser and s/he decide together on what reasonable goals are for the next twelve months. These goals will define "satisfactory progress" at the next assessment meeting.

Appeals
The student may appeal any assessment to the director of graduate studies. If not satisfied, s/he may seek the remedies described in the Graduate School catalog.

Funding Impact of Incomplete Reports
Completion of the Graduate Student Progress System forms by both student (Progress Report) and faculty (Adviser Response) is mandatory to maintain eligibility for any form of financial aid from the department. Receipt of financial aid requires confirmation by a student's adviser that s/he is making satisfactory progress. No student in the program who applies for or who is seeking renewal of financial aid will be eligible for aid without a complete and up-to-date Graduate Student Progress System Report on file.

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Rate of Completion

A PhD student must successfully complete the comprehensive examination within a period of five years beginning with the first semester of enrollment as a PhD student. For an extension of this the student must petition the Graduate School by submitting a request to the adviser who, in turn, submits a written recommendation to the Graduate School. The director of graduate studies will also make a written recommendation. In addition, the dissertation must be successfully defended within five years of passing the comprehensive examination. On petition of the candidate and the candidate's department, an extension of time may be granted by the Graduate School.

Courses

See History (HIST) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Human Development & Family Studies Graduate Programs

Contact Information

College of Human Environmental Sciences
314 Gentry Hall
573-882-4035
http://hdfs.missouri.edu/

About Human Development & Family Studies

Selected in 2002 and again in 2007 as the Most Outstanding Graduate Department on campus, we have a nationally recognized faculty whose research productivity was recently ranked in the top 5% of the 235 family studies programs across the country. Our department houses former editors of the *Journal of Social & Personal Relationships*, *Journal of Marriage and Family*, and *Family Relations*, three of the premier peer-reviewed, academic journals in our field, as well as past presidents of the National Council of Family Relations and the National Association for the Education of Young Children.

We have a well-established mentoring program, which begins as soon as the student is accepted into the program. We actively prepare our students to become successful academic scholars both in terms of research and teaching. The range of careers for which we prepare our students is virtually unparalleled. Since 2000, our program has placed more faculty into research extensive family studies departments than any other program in the U.S. We also prepare PhD and Master's students for applied careers in administration, program evaluation, and program development. Our alumni have positions with universities and colleges in the United States, Canada, and Korea. We have developed an outstanding reputation as a place to study individual and family diversity and multiculturalism across the life course. Because we define diversity and multiculturalism broadly, our focus is on the multitude of ways that individuals and families may differ, including, but not limited to race, ethnicity, socioeconomic status, age, family structure, nationality, geographic location, and sexual orientation.

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Human Development and Family Studies Graduate Faculty

Marilyn Coleman
Curators' Professor and director of graduate studies, EdD, University of Missouri.

Teresa Cooney
associate professor, PhD, Pennsylvania State University.

Mark Fine
professor, PhD, The Ohio State University.

Lawrence Ganong
professor and co-chair, PhD, University of Missouri.

Melissa Herzog
assistant research professor, PhD, Arizona State University.

Jean Ispa
professor and co-chair, PhD, Cornell University.

Stephen Jorgensen
professor and dean, PhD, University of Minnesota.

Louis Manfra
assistant professor, PhD, George Mason University.

Christine Proulx
assistant professor, PhD, University of North Carolina-Greensboro.

Russell Ravert
assistant professor, PhD, Indiana University.

Cynthia Reeser
assistant teaching professor, PhD, University of Kentucky.

Duane Rudy
associate professor, PhD, University of Toronto.

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David Schramm
assistant professor, PhD, Auburn University.

Kathy Thornburg
emeritus professor, PhD, University of Missouri.

Degrees Offered

- Online: Graudate Certificate and MA
- On-Campus: MA, MS and PhD

Admission Contact Information

Marilyn Coleman
314 Gentry; Columbia, MO 65211
573-882-4360

Admission Criteria for Campus Programs

- Fall deadline: December 31
- Spring deadline: November 15
- Summer deadline: December 31
- Minimum TOEFL score: 550/61 (paper/internet)
- Minimum GRE score: Minimum of two subtests must be 50th percentile or above (some exceptions are made)
- Minimum GPA: 3.0 for last 60 hours

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the HDFS Department:

- 3 letters of recommendation from people who can speak to applicant's potential to do graduate work
- GRE scores (and TOEFL scores for international applicants)
- Personal statement
- Résumé, if possible
- Official Transcripts

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Admission Criteria for Online Programs

No admission deadlines (Although applications must be received at least two months prior to beginning course work.)

- Minimum GPA: 3.0 for last 60 hours

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the HDFS Department:

- 3 letters of recommendation from people who can speak to applicant's potential to do graduate work
- GRE scores (and TOEFL scores for international applicants)
- Personal statement
- Résumé, if possible
- Official Transcripts

Financial Aid from the Program

All applicants for the campus program are automatically considered for internal assistantships, fellowships, or other funding packages. Check the HDFS Web site or ask the program contact for additional details.

Master's in Human Development & Family Studies

About the Master's Degrees

The Department of Human Development and Family Studies offers Master of Arts (applied emphasis) and Master of Science (research emphasis, on-campus only) degrees. The MA and MS degrees prepare students for positions in junior college or college teaching and leadership in both public and private human service institutions.

Areas of Study

On-campus students selecting the MA or MS degree may specialize in family studies, child life, early childhood development, life span development, family mediation, human services program (emphasis in administration or policy), or a dual-degree program in HDFS and the School of Law. Online students may select an MA specializing in gerontology, youth development, or family studies.

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Online Graduate Certificates

About the Certificate Programs

The Department of Human Development and Family Studies offers three online graduate certificates with specialization in youth development, youth development program management and evaluation, and gerontology.

Courses taken for any of the above certificate programs may be applied toward the related online MA degrees in youth development and gerontology.

Plan of Study

Programs are structured to provide students with an integration of theoretical perspectives, empirical research training, and practical experiences. The number of hours required for each master's degree is as follows:

- Family Studies: 39 hours
- Child Life: 30 or 36 hours
- Early Childhood: 36 hours
- Life Span: 36 hours
- Family Mediation: 39 hours
- Human Services: 36 hours
- Gerontology: 36 hours
- Youth Development: 36 hours
- Dual MS/JD: 128 hours

The number of hours required for each online graduate certificate is as follows:

- Youth Development Specialist: 13 hours
- Youth Development Program Management and Evaluation: 13 hours
- Gerontology: 21 hours

Research

Based on their chosen degree option and whether they are pursuing an MS or an MA degree, master's students may write a thesis (HDFS 9090), complete a project (HDFS 8090), or internship (HDFS 8972) for up to six credit hours. The thesis results from research testing a hypothesis or exploring a research question. The project option is no less scholarly, but usually has a practical nature and may involve designing a program and developing curriculum materials (e.g., instructional videotapes,

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web sites, resource manuals, or other applied projects). Students who wish to pursue the thesis option must petition the department graduate faculty for approval. Students completing a thesis earn a Master of Science degree.

Satisfactory Progress

Departmental Definition of Satisfactory Rate of Progress

The student is considered to be making satisfactory progress when:

1. By the end of the first year, the M1 form has been filed (MA/MS) or the D1 and D2 forms have been filed and the program committee is established (PhD);
2. A grade of B or above in departmental courses taken for graduate credit and an overall GPA of 3.0 or better is maintained. For students awarded scholarships or fellowships, a GPA of 3.5 or better is maintained;
3. Continuous enrollment is maintained and the student is actively engaged in course work or research (PhD). An incomplete grade in any course will result in probationary status for the subsequent semester. An incomplete grade not resolved by the end of the following semester will be deemed unsatisfactory academic progress. The student will be notified in writing that he or she is on probation. If, at the end of the next review, the student has not made progress on resolving the incomplete grade, the student will be dismissed. In order to determine course offerings and other graduate student needs, the faculty reviews the graduate program at the end of each academic year. As part of this review, the progress of each student is noted. Students not making adequate progress receive letters advising them of the faculty's concern. Assistantships to continuing students are awarded on the basis of satisfactory progress in their degree programs, satisfactory performance in prior assistantships, and availability of funding.

Unsatisfactory academic progress for two consecutive semesters leads to termination from the graduate program.

Time Limits for Masters' Degree Completion

A graduate degree represents current knowledge of the field as of the date the degree is granted. Limitations have therefore been set regarding the number of years to finish the degree. Students working towards the master's degree should be aware that they have 5 years

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in which to complete all degree requirements. The clock starts the semester the first course is taken. Extensions for one additional year to complete the degree may be granted with submission of a detailed plan for completion, including a timetable. Students must be making progress toward completion when they apply for the extension. A maximum of two extensions may be granted.

Doctorate in Human Development & Family Studies

About the PhD

The Department of Human Development and Family Studies PhD degree prepares students for careers in research, college or university teaching, or leadership positions in public and private human service institutions.

Plan of Study

Students selecting the doctoral degree work with members of their doctoral committee to create an individualized plan of study. Over the course of their degree program, however, all doctoral students are required to enroll in six credit hours of research practicum and three credit hours of teaching practicum and take courses in theory, research methods and a collateral area. In addition, all doctoral students complete a minimum of 12 credit hours of research for their dissertation.

Satisfactory Progress

See department's definition of Satisfactory Rate of Progress above.

Qualifying Process for Doctoral Students

To be officially admitted to the HDFS doctoral program, students generally must have completed a master's degree in HDFS or a related field, although exceptions are granted.

PHD Comprehensive Matriculation Exam

Part I: In-house Written and Oral Exam

The in-house exam consists of writing over (1) theory, methods, and statistics, (2) the student's area of specialization and core content, and (3) the student's collateral area. The advisor is responsible for collecting questions from all five committee members, constructing the exam,

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and getting approval for the final version from available committee members. It is expected that the written exam will take the student no longer than 8 hours (e.g., two half-days or one full day) to complete. The in-house exam will be scored by the committee. Passing this section of the exam means the student is eligible to go forward with the oral defense. During the oral defense, committee members may ask the student to defend his or her written answers and also probe for understanding of the questions administered but not chosen during the written exam. If the student does not pass the in-house exam, the committee will recommend remedial measures, in writing, for the student to take prior to retaking the exam. The student can retake the in-house exam (with new questions) no sooner than 12 weeks after the failed first attempt. Not passing the in-house exam a second time automatically prevents candidacy. The D-3 form indicating this is sent to the Graduate School. When the student satisfactorily completes the in-house exam, an oral exam will be scheduled within two weeks. Failing the oral exam will result in dismissal from the PhD program. Satisfactory performance on the oral exam allows the student to progress to writing the Grant Proposal.

Part II: Grant Proposal and Oral Exam
Students are to prepare a grant proposal for Part II of the comprehensive exam, using the NIH RO3 application format and following all of the guidelines for such a proposal. For more information about the R03 funding mechanism, visit http://grants1.nih.gov/grants/funding/r03.htm. For more information about the R03 forms and instructions, visit http://grants1.nih.gov/grants/forms.htm and http://grants.nih.gov/grants/funding/phs398/phs398.html. Institutional information necessary for grant preparation, particularly the budget (e.g., graduate student stipends and benefits, indirect rates) is at http://research.missouri.edu/funding/help.htm.

Timeline
A pre-proposal is to be presented to the supervisory committee within two weeks after the completion of the in-house oral exam. Once the committee approves the pre-proposal the student will begin writing the grant proposal. Students have 3 months to submit it to their committee.

The Pre-Proposal
The grant proposal should result in a thematic and systematic research

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plan that potentially could be followed in the first years after completion of the doctoral degree. To this end, a three-to-five page double-spaced pre-proposal will be presented to the doctoral committee. The pre-proposal is to include: (a) an abstract of the direction the student predicts the proposal will take (limit of 1 page); (b) a description of the area of study in which the proposal will focus; (c) a justification of the importance of this area of research (with an outline of the literature review section of the proposal); (d) a draft of the research questions and/or hypotheses that will be addressed in the proposal; and (e) a description of the basic research design. A reference list should also be attached. After submitting the pre-proposal, a meeting is scheduled with the doctoral committee to provide feedback to the student and to decide whether the pre-proposal is approved by the committee. If approved, committee members sign the approval form (see Appendix A) and the student begins writing the grant proposal. If the pre-proposal is not approved, the student must revise it based on committee feedback and schedule another meeting. The pre-proposal is to be included with the final grant proposal as part of the appendices.

Grant Proposal

The grant proposal is to span 3 years and focus on either (a) multiple studies (up to three) that build on each other or (b) a longitudinal study that includes substantive and unique analyses of each wave of data. It is expected that the study will be theoretically based and will include relevant literature as part of the projects's justification. The sampling, procedures, methods, design, and analyses are to be clearly articulated. In addition, the comprehensive exam proposal is to include copies of the measures to be used and a timeline (in an appendix), as well as a budget and a budget justification. Human Subjects guidelines are to be followed as per the specific R03 instructions and the Internal Review Board (IRB) section should be completed, although the student is not required to actually submit the proposal for IRB approval.

Questions That Arise About the Grant Proposal

The comprehensive examination is to reflect solely the efforts and abilities of the individual student. Although students are allowed to consult their supervisory committee about issues that arise while writing their proposal, this is to be done at the general rather than the specific level. Procedural questions should be submitted to the director of graduate studies and the graduate committee by the supervisory

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chair. Consultation about the proposal is limited to these sources. If it is discovered that the student consults with others outside of these sources, the supervisory committee will instigate sanctions.

The options that may be taken by the committee following the submission of the first grant proposal are as follows:

1. Accept the grant proposal.
2. Require that the student revise and resubmit the grant proposal within 60 days. If the revision is satisfactory, and the student passes the oral exam, they begin their dissertation process. If the revision is unsatisfactory; the student fails the first attempt and the committee recommends remedial measures, which will be stated in writing. The student may begin the process over by submitting a proposed outline for a grant proposal on a NEW topic deemed appropriate by the committee. Once the committee approves the proposal, the student again has a maximum of 3 months to complete the proposal.

The options that may be taken by the committee following the submission of the second grant proposal are as follows:

1. Accept the proposal.
2. Request the student revise and resubmit the proposal within 60 days. If the revision is satisfactory, and the student passes the oral exam, the student moves on to the dissertation. If the revision is unsatisfactory, the student fails the comprehensive exam, which automatically prevents candidacy. The D-3 form indicating that the student did not pass is submitted to the Graduate School. The student is dismissed from the PhD program.
3. Not accept the proposal, which automatically prevents candidacy and results in filing the second D-3 form with the Graduate School. The student is dismissed from the PhD program. A student may experience circumstances that make it difficult to finish his or her comprehensive exam within this time line (e.g. accident, severe illness). In these rare circumstances, the student and the committee chair may apply for an extension by submitting a written request that (a) details the reasons for an extension and (b) proposes a new deadline to the director of graduate studies and their committees.

Admission to Candidacy

After students pass the comprehensive examinations, they will complete a prospectus for the dissertation project. The prospectus

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should include a pertinent review of the literature, statement of the problem, the purpose of the proposed study, description of the research design, and discussion of the specific means by which the data will be analyzed. Subsequently, the dissertation committee will meet to evaluate, request revisions to, and approve the student's dissertation prospectus or proposal. After the dissertation committee has approved the dissertation prospectus, the student will apply to the Division of Graduate Studies for admission to candidacy.

Time Limits on Degree Completion

A graduate degree represents current knowledge of the field as of the date the degree is granted. Limitations have therefore been set regarding the number of years to finish the degree. Doctoral students have 6 years in which to complete degree requirements. The clock starts the semester that the first class beyond the master's degree is taken. The comprehensive exam must be completed no later than by the end of the fourth year of study. HDFS doctoral students have only three years after passing the comprehensive examination to complete the doctoral degree.

Petitions for Extension

On petition of the candidate, an extension of 1 year may be granted by the HDFS graduate faculty. The student may petition for no more than two one-year extensions. Therefore, a doctoral student may have no more than 5 years, including two one-year extensions, to complete the doctoral degree after passing the comprehensive exam. On petition of the candidate and the candidate's department, an extension of this time limit may be granted by the Graduate School.

Courses

See Human Development & Family Studies (HDFS) graduate courses in the myZou online system or on the HDFS Web page (PDF).

END OF PROGRAM DESCRIPTION

Industrial & Manufacturing Systems Engineering

Contact Information

College of Engineering
E3437 Lafferre Hall
573-882-2691
http://engineering.missouri.edu/imse/

About the Program

The graduate program in industrial engineering provides a scholarly environment in which highly qualified, creative students may obtain the knowledge and develop the skills necessary to solve complex industrial, governmental and societal system design problems. These systems are required to operate within increasingly complex constraints, thus requiring the use of sophisticated and creative designs. The industrial engineer responsible for such designs must be capable of applying a broad spectrum of scientific tools if the most effective systems are to be obtained.

Degree Programs

In industrial engineering, the master of science program is designed to provide a basic understanding of these tools and experience in the application of these tools in the design process. The doctor of philosophy program is designed to provide the specialized knowledge and skills necessary to develop new tools or methods for solving complex systems design problems. Information on engineering licensure is detailed under Professional Engineering Registration.

General Admission Guidelines

Acceptance for advisement in the department's graduate programs is available to students with an ABET accredited undergraduate engineering degree. Engineering graduates who have not taken linear programming, linear algebra, statistical quality control or engineering economic analysis must complete 12 hours of additional course work before graduation.

Students with baccalaureate degrees in mathematics, physics, chemistry or computer science may be accepted if they have completed 13 hours of

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calculus, three hours of differential equations and six hours of calculus-based probability and statistics. Several factors are considered in evaluating an applicant's capability, such as overall GPA, grade trends and major area grades. In addition, each applicant is required to take the general test of the GRE and international students must take the TOEFL and TWE.

Facilities and Resources

Laboratory facilities in several major application areas, both within the department and in the college, support the academic program. Neighboring industries, city, county and state government agencies, local hospitals and nearby large metropolitan centers provide a reservoir of research and design opportunities.

Computing and Reference Materials

The department has access to the University of Missouri System computing network and maintains its own computing facilities for student use. Besides Ellis Library facilities, an excellent collection of mathematical, statistical and engineering books and reference materials are housed in the engineering library and the industrial and manufacturing systems engineering departmental library.

Funding

Fellowships, scholarships and teaching and research assistantships are available to qualified graduate students. These forms of financial assistance are supported by funds made available through state, federal and industrial graduate support programs and through research grants from various industrial and governmental agencies.

Industrial and Manufacturing System Engineering Faculty

Luis G. Occeña

interim chair and associate professor, PhD, Purdue University. Systems and information integration, computer-aided process modeling, product realization from design to manufacturing, industrial control and automation, artificial intelligence applications.

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Linsey M. Barker
assistant professor, PhD, Virginia Tech. Patient safety, healthcare worker performance and safety, medical education, innovative healthcare service delivery technologies, and the development of assessment and quality improvement programs within the healthcare systems.

Larry G. David
professor emeritus, PhD, Purdue University. Quality control systems, statistical applications to manufacturing, analysis of capital expenditures, human factors engineering, product liability and safety.

Owen W. Miller
professor emeritus, DSc, Washington University. Statistical process control/statistical quality control, productivity enhancement for small business, IE/OR applications.

Cerry M. Klein
professor, PhD, Purdue University. Integrated production systems, logistics systems, mathematical modeling, meta-heuristics, discrete and combinatorial optimization, multi-attribute decision making, fuzzy logic, enterprise resource planning systems.

Bin Wu
professor, PhD, Brunel University. Manufacturing and supply systems design; life-cycle management of manufacturing and supply systems; systems theory; systems analysis and design methodologies; decision making, information systems, static and dynamic systems modeling.

C. Alec Chang
director of graduate studies, associate professor, PhD, Mississippi State University. Automated measurement and inspection with computer vision, product design and quality engineering, multi-sensor fusion, management information systems.

Wooseung Jang
associate professor, PhD, University of California–Berkeley. Stochastic modeling and optimization, scheduling, production and quality control of manufacturing and service systems, supply chain management, enterprise resource planning systems.

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James S. Noble
director of undergraduate studies, associate professor, PhD, Purdue University. Integrated material flow systems analysis, scheduling systems, economic evolution of manufacturing systems, manufacturing systems ecology, performance modeling, mixed integer programming, meta-heuristics, economic evaluation, static and dynamic systems modeling, industrial ecology.

Mustafa Y. Sir
assistant professor, PhD, University of Michigan. Modeling decision making under uncertainty, and developing algorithmic and computational methods needed to effectively (and practically) determine good (if not "optimal") solutions.

Esra Sisikoglu
assistant professor, PhD, University of Michigan. Stochastic search algorithms, sampled fictitious play, (approximate) dynamic programming, algorithm design, large-scale optimization, mathematical programming and modeling, game theory, convex optimization.

Master's in Industrial & Manufacturing Systems Engineering

Admission Contact Information

Paula McDonald (McDonaldP@missouri.edu)
E3437 Thomas and Nell Lafferre Hall; Columbia, MO 65211
573-882-2691

Minimum Admission Criteria

Applications accepted throughout the year

- Fall Decision Dates: April 1
- Spring Decision Date: September 15
- Minimum TOEFL score: 550/213/80 (paper/computer/internet) (international applicants)
- Minimum GRE score: V: 350, Q:700
- Minimum GPA: 3.0/4.0
- Test of Written English: (TWE) of 4.0 (international applicants)

This department does not use "rolling admission." Decision will be notified around decision dates.

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Required Application Materials

To the Graduate School

- All required Graduate School documents

To the IMSE Graduate Program

- 3 letters of recommendation
- Statement of Purpose
- Curriculum Vitae (CV)
- GRE scores

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

About the Master's Programs

No foreign language is required in either program.

Master of Science

The Master of Science in Industrial Engineering (MS) degree consists of two options: a 30-credit hour research oriented program requiring a thesis or a 33-credit hour project option. The MS Industrial Engineering thesis option curriculum is built upon the choice of a concentration area around which students can mold their overall academic effort including six hours of research. The three focus areas are Operations Research and Statistics, Manufacturing/Production/Service Systems and Enterprise Information Systems. The MS Industrial Engineering project option is a thirty-three credit hour program. Students are required to complete thirty hours of approved course work and three hours of an approved project advised by a faculty member.

Master of Engineering

The Master of Engineering (ME) degree is a non-research thirty-six-credit-hour program designed to be a terminal degree. The ME curriculum is based upon a seven-course core with the remaining 15 hours made up of courses appropriate to the student's concentration area.

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Dual Master's Degree Programs

Master of Science and MBA

The Department of Industrial and Manufacturing Systems Engineering, in cooperation with the College of Business offers a dual master's degree program for those students who wish to combine the specialized skills of the industrial engineer with the general knowledge of the professional manager. The program was developed in recognition of the fact that solutions to organization problems often require that the engineer's analytical abilities be applied simultaneously with the manager's integrative perspective. This dual program has been carefully structured to provide the necessary academic background to obtain an MS in industrial engineering and an MBA simultaneously, in a minimum amount of time, usually two academic years.

Master of Science and MHA

The Department of Industrial and Manufacturing Systems Engineering, in cooperation with the health services management program of the School of Medicine, offers a dual master's degree program to prepare its graduates for careers in the design and administration of health-care delivery systems and organizations. The program was developed in recognition of the highly complex nature of health-care organizations. The program's basic objective is to fuse competencies in health-service management and in health-systems design. The required courses in the industrial engineering program serve as the area of specialization in the health services management program, and the required courses in the health-services management program are used as electives in the industrial engineering program. As a result, it is possible for the student to earn an MHA in health-services management and an MS in industrial engineering simultaneously.

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Doctorate in Industrial & Manufacturing Systems Engineering

Admission Contact Information

Paula McDonald (McDonaldP@missouri.edu)
E3437 Thomas and Nell Lafferre Hall; Columbia, MO 65211
573-882-2691

Admission Criteria

Applications accepted throughout the year

- Fall Decision Dates: April 1
- Spring Decision Date: September 15
- Minimum TOEFL score: 550/213/80 (paper/computer/internet) (international applicants)
- Minimum GRE score: V: 350, Q:700
- Minimum GPA: 3.5/4.0
- Completed master's thesis or equivalent
- Compatible research interests or capabilities with a member of the faculty

Only highly qualified students are accepted for advisement in the PhD program. The faculty look for excellence in undergraduate and graduate work, high GRE scores and strong indications of research potential from their Master's thesis.

This department does not use "rolling admission." Decision will be notified around decision dates.

Required Application Materials

To the Graduate School

- All required Graduate School documents

To the IMSE Graduate Program

- 3 letters of recommendation
- Abstract of thesis and copy of papers
- Statement of Purpose
- Curriculum Vitae (CV)
- GRE scores

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Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

About the Doctoral Degree

Programs are individually tailored to meet students' objectives and to culminate in an original research dissertation.

Degree Requirements
The granting of a PhD requires completion of five major requirements:

- A qualifying examination,
- A course of study,
- Comprehensive examination,
- Acceptance of dissertation proposal,
- Final public defense of the completed dissertation.

The PhD builds upon the MS programmatic areas. The three focal areas are Operations Research and Statistics, Manufacturing/Production/ Service Systems and Enterprise Information Systems. Fundamental IE knowledge in each is expected. The basic goals of the PhD program are to provide students with a solid understanding of the theoretical bases for the latest tools and techniques of systems analysis and design, an extensive experience in applying these analyses and design tools and techniques, and research experience in the development of new tools or applications of existing techniques to design or analyze problems.

Courses

See Industrial & Manufacturing Systems Engineering (IMSE) graduate courses in the myZou online system.

END OF INDUSTRIAL & MANUFACTURING SYSTEMS ENGINEERING DESCRIPTION

Informatics Institute Graduate Programs

Contact Information

muiigraduateprogram@missouri.edu
241 Engineering Building West
Columbia, MO 65211-2060
573-882-9007
http://muii.missouri.edu

About the Informatics Institute (MUII)

Building on a tradition of outstanding informatics education and research at Missouri, the doctoral program is a joint program of 37 faculty from 14 different departments in six different colleges, currently including the Departments of Animal Sciences, Biochemistry, Biological Sciences, Computer Science, Family and Community Medicine, Geology, Health Management and Informatics, Industrial & Manufacturing Systems Engineering, Information Science and Learning Technologies, Life Sciences, Molecular Microbiology and Immunology, Nursing, Pathology & Anatomical Sciences, and Physics who make up the Informatics Institute (MUII). The Institute offers emphasis areas in bioinformatics and health informatics. Each emphasis area stresses skill sets and research appropriate to the subfield within the broad area of informatics. A core curriculum provides all students with a foundation of knowledge and tools in biology, computer sciences, health systems, and statistics, after which they complete further coursework in their chosen emphasis area. The integrated program assures broad exposure to the field and fosters new insights and innovative research concepts.

Degrees Offered

The Informatics Institute offers a doctoral degree (PhD) in two tracks: bioinformatics and health informatics.

Resources and Facilities

The Institute is located in multiple locations on MU campus with well-equipped laboratories containing state-of-the-art instrumentation and computing facilities for informatics research. Major instrumentation

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includes a Dell EM64T cluster system with 512 processors, an SGI Altix BX2 SMP server with 64 Itanium2 processors, IBM iDataPlex high-performance computing system, and a number of DELL servers with multiple quad-core processors for computational researches.

Faculty Areas of Research Interest
Faculty research covers a wide range of interests including structural bioinformatics, systems biology, cancer informatics, chemical informatics, epigenomics, phenomics, text mining & understanding, electronic health records, evidence-based medicine, personalized medicine, human-computer interactions in health care, consumer informatics, patient safety, public health informatics, geospatial informatics, information retrievals, biomedical data mining & knowledge discovery, and machine learning.

Internal Funding
Fellowships and research/teaching assistantships are available for highly qualified applicants. Application information is available on the Institute's Web site.

Informatics Faculty

Chi-Ren Shyu
director, Paul K. and Diane Shumaker Endowed Professor, PhD, Purdue University. Biomedical informatics, large-scale biomedical database retrieval, imaging informatics, structural bioinformatics, phenomics, geospatial informatics.

Sanda Erdelez
associate director for education, associate professor, PhD, Syracuse University. Business and competitive intelligence, legal informatics, users' information needs and uses in E-Government, E-Commerce and E-Learning.

Scott Givan
associate director for services, research assistant professor, PhD, University of Oregon. Bioinformatics, genome annotation, gene expression analysis; computational infrastructure development to effectively deliver resources to researches; web-based data analysis and delivery systems; analysis of high throughput biological data; visualization of high throughput biological data.

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Gregory L. Alexander
assistant professor, PhD, RN, University of Missouri. Nursing informatics, human factors, human computer interaction, quality improvement.

Gerald Arthur
research assistant professor, MD, University of Chicago. Pathology informatics, computational biology, epigenomics.

Linsey M. Barker
assistant professor, PhD, Virginia Tech. Human factors engineering, industrial ergonomics and occupational safety, health systems engineering, human systems integration, human performance modeling.

Suzanne Austin Boren
assistant professor, PhD, University of Missouri. Health informatics, consumer informatics, health care quality, evidenced-based medicine, patient safety.

Gordon D. Brown
professor, PhD, University of Iowa. Health informatics, clinical process redesign and decision support, knowledge management, information as an enterprise strategy.

Charles W. Caldwell
professor, MD, PhD, University of Missouri. Biomedical informatics, cancer informatics.

Shi-Jie Chen
professor, PhD, University of California-San Diego. Bioinformatics, statistical thermodynamics and kinetics of RNA and protein folding.

Jianlin Cheng
assistant professor, PhD, University of California, Irvine. Bioinformatics, systems biology, machine learning and data mining.

Gavin C. Conant
assistant professor, PhD, University of New Mexico. Bioinformatics, molecular evolution, polyploidy, comparative genomics, network biology.

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Peter Cornish
assistant professor, PhD, Texas A&M University. Bioinformatics, RNA biochemistry, single molecule fluorescence, NMR, RNA folding and dynamics.

Justin Wade Davis
assistant professor, PhD, University of Missouri. Bioinformatics, statistics, bioinformatics.

Ye Duan
assistant professor, PhD, State University of New York at Stony Brook. Bioinformatics, imaging analysis, visualization.

Yang Gong
assistant professor, PhD, University of Texas Health Science Center at Houston. Health informatics, clinical informatics, human factors.

Lanis Hicks
professor, PhD, University of Missouri. Health informatics, health economics, rural health, telemedicine, nursing home quality.

Jeannette Jackson-Thompson
research associate professor, PhD, University of Missouri. Health informatics, breast and colorectal cancer incidence and trends; quality of life for cancer survivors and the general population; comparative effectiveness research; database management, data quality and data security.

Toni Kazic
associate professor, PhD, University of Pennsylvania. Bioinformatics, biochemical networks, chemical informatics, complex phenotypes, federated databases, formal languages.

James Keller
Curators' Professor, PhD, University of Missouri. Bioinformatics, computational intelligence with concept applications to elder care technology, geospatial intelligence and landmine detection.

Min Soon Kim
assistant professor, PhD, University of Texas-Austin. Health informatics, human factors engineering, health information technology evaluation, health quality evaluation, public health informatics.

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Karl Kochendorfer
assistant professor, MD, University of Illinois-Chicago. Medical informatics, family medicine, obstetrics, women's health.

Dmitry Korkin
assistant professor, PhD, University of New Brunswick. Bioinformatics, computational biology, structural bioinformatics, machine learning and pattern recognition.

Timothy Matisziw
assistant professor, PhD, The Ohio State University. Geoinformatics, network and location modeling, geographic information science, operations research, GIS and environmental planning.

Satish S. Nair
Robert Buescher Professor, PhD, The Ohio State University. Medical informatics, systems biology, computational neuroscience, psychiatric engineering.

Kalyan Pasupathy
assistant professor, PhD, Virginia Tech. Health informatics, operations research, optimization, simulation, data mining, systems modeling, systems informatics.

Winfred Phillips
clinical assistant professor, PhD, Yale University. Health informatics, electronic medical record systems, computerized physician order entry systems.

J. Chris Pires
assistant professor, PhD, University of Wisconsin, Madison. Bioinformatics, phylogenomics, evolutionary bioinformatics, polyploidy and comparative genomics, phylogeny and chromosomal evolution.

Mihail Popescu
assistant professor, PhD, University of Missouri. Health informatics, eldercare technologies, medical decision making, fuzzy logic.

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Cheryl Rathert
assistant professor, PhD, University of Nebraska, Lincoln. Health informatics, health care work environments and work processes, organizational ethics, telehealth, patient and health care provider perceptions and experiences.

Grant Savage
professor, PhD, The Ohio State University. Health informatics, health care management, stakeholder and strategic management, conflict management and negotiation.

Gordon K. Springer
associate professor, PhD, Pennsylvania State University. Bioinformatics for plant and animal genomics, health informatics, high-performance computing.

Douglas Wakefield
professor, PhD, University of Iowa. Health informatics, management development, quality, job satisfaction and turnover.

Cuizhen (Susan) Wang
associate professor, PhD, Michigan State University. Geoinformatics, bio-environmental remote sensing, GIS and spatial analysis, innovation modeling of optical/radar synergy in biophysical remote sensing, environmental stress monitoring.

Dong Xu
Dowell Professor, PhD, University of Illinois, Urbana-Champaign. Bioinformatics, structural bioinformatics, genomic sequence analysis, gene expression data analysis, epigenomic data analysis, mass spectrometry data analysis, gene regulation, biological pathway, cancer informatics, soybean informatics.

Illhoi Yoo
assistant professor, PhD, Drexel University. Health informatics, semantic-oriented information retrieval, biomedical text mining.

Xiaoqin Zou
assistant professor, PhD, University of California, San Diego. Bioinformatics, structural bioinformatics, virtual database screening, computer-aided drug design, modeling of quantitative structure-function relationships of membrane proteins.

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Doctorate in Informatics

Admission Contact Information

MUII Staff (muiiadmissions@missouri.edu)
241 Engineering Building West
Columbia, MO 65211-2060
Phone: 573-882-9007
FAX: 573-884-8709
Informatics Institute (MUII) Web site: http://muii.missouri.edu/

Admission Criteria

- Fall deadline: March 1
- Preferred GRE score: V+Q ≥ 1200, A: 3.5-4.0; or preferred GMAT 570
- Preferred GPA: 3.3 out of 4.0
- Preferred TOEFL score: 577/90 (paper/internet) or a preferred ELTS score: 6.0
- Sufficient background and training to pursue advanced degree in informatics

All Required Documents:

All students are required to apply through the Graduate School's on-line process. To begin your application, please see the ApplyYourself Web site below.

https://app.applyyourself.com/?id=umc-grad

- Curriculum Vitae
- Statement of Purpose, which should include a summary of why the applicant is interested in pursuing an advanced informatics degree, a brief description of your previous research experiences, the specific area of informatics you are interested in pursuing, and your future career goals and plans in the informatics field.
- GRE/GMAT scores and TOEFL/ELTS scores for international applicants, if required.
- Three letters of recommendation from faculty or supervisors who can evaluate the applicant's credentials and potential to become successful in the area of informatics.
- Official transcripts from each college and university you have attended; official transcripts must be sent from each institution directly to the Graduate School.

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Optional Documents
Applicants are encouraged to submit representative publications in informatics, if available.

Informatics Doctoral Degree Requirements
The following is a brief synopsis of the general degree requirements; please see the Informatics Institute Web site (http://muii.missouri.edu/index.php?pid=3) for complete details:

- Students must take courses listed in the core and emphasis areas
- Students must pass a qualifying examination
- Students must present at least one institutional seminar annually
- Students are required to complete a comprehensive exam, which includes written and oral elements, within a specified time frame
- Students must pass a comprehensive examination at least 7 months before their scheduled defense
- Students must submit and defend a dissertation describing the results of successful and original research in one of the branches of informatics

To show research progress, students are expected to be working toward presenting at conferences and publishing in peer-reviewed journals based on their informatics research.

Courses

The PhD courses offered by MUII are listed as INFO INST in the myZou online system.

END OF PROGRAM DESCRIPTION

Information Science & Learning Technologies Graduate Programs

Contact Information

School of Information Science and Learning Technologies
Student Coordinator's Office
304 Townsend Hall
Columbia, MO 65211
573-884-2670 or toll free 877-747-5868
http://education.missouri.edu/SISLT/

About Information Science & Learning Technologies

In January 1997, the School of Information Science & Learning Technologies became the home for MU's graduate programs in Library and Information Science and Educational Technology as well as a new, interdisciplinary doctoral program in Information Science & Learning Technologies. SISLT faculty are internationally renowned for their research and development accomplishments. As new students quickly realize, the faculty are committed to a collaborative, interdisciplinary approach – both within MU and among other research-extensive universities. Nowhere is this more evident than in the Allen Institute, a 10,000 square foot facility dedicated to supporting collaborative R&D at the intersection of Information & Learning.

Degrees Offered

The emphasis areas available in the Information Science and Learning Technologies program include:

- MA: Library Science
- MA: Library Science with initial library certification
- M Ed and EdSp: Educational Technology (M Ed and EdSp available online through MU Direct)
- PhD: Information Science & Learning Technologies

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Information Science and Learning Technologies Faculty

Denice Adkins
associate professor, PhD, University of Arizona.

Jenny Bossaller
assistant professor, PhD, University of Missouri.

Melanie Brooks
assistant teaching professor, PhD, Florida State University.

John M. Budd
professor, PhD, University of North Carolina-Chapel Hill.

Julie Caplow
associate professor, PhD, University of Iowa.

Sanda Erdelez
associate professor, PhD, Syracuse University.

Linda Esser
associate teaching professor, EdD, University of Kentucky.

Gail Fitzgerald
professor, PhD, University of Iowa.

Jane Howland
associate teaching professor, PhD, University of Missouri.

David Jonassen
professor with distinction, EdD, Temple University.

Aimee Klimczak
assistant teaching professor, PhD, University of Missouri.

Thomas R. Kochtanek
associate professor, PhD, Case Western Reserve University.

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James Laffey
professor, PhD, University of Chicago.

Chris LeBeau
assistant teaching professor, MLS, Long Island University; MBA, Creighton University.

Rose Marra
associate professor, PhD, University of Colorado-Denver.

Joi Moore
assistant professor, PhD, University of Georgia.

Karen Robinson
associate teaching professor, MLS, Emporia State University.

MaryEllen Sievert
professor emerita, PhD, University of Missouri.

John Wedman
director, professor, PhD, University of Oklahoma.

Library Science MA

Admission Contact Information:
SISLT Student Coordinator's office
304 Townsend Hall
Columbia, MO 65211
Phone: 573-884-2670 or toll free 877-747-5868
Email: sislt@missouri.edu

Admission Criteria

- Fall deadline: May 1
- Spring deadline: October 1
- Minimum TOEFL score: 500/173/61 (paper/computer/internet)
- Minimum GRE score: 550 Verbal, 550 Quantitative, 4.0 Analytical Writing
- Minimum GPA: 3.0 in the last 60 hours of the undergraduate degree

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Required Application Materials

To the Graduate School:

- All required Graduate School documents, including the online graduate application and bachelor's transcripts

To the Library Science MA program (http://education.missouri.edu/SISLT/LIS/LIS_Applying.php):

- Statement of Purpose: Briefly describe (in 500 words or less) your immediate educational and career goals. Please respond to the following questions:
  Why do you want to earn a master's degree in Library and Information Science? What areas of Library and Information Science interest you; do you anticipate working in a particular type of library or information agency?
  (can also be uploaded into Graduate School online application).
- Curriculum Vitae or Résumé
- 2 letters of reference
- GRE scores

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

About the Library & Information Science MA Program

The program is accredited by the American Library Association. The mission of the library and information science program is to transform thought, and through thought, action in libraries and information environments. The program seeks to accomplish this mission by three means:

- through the education of students
- by conducting and interpreting inquiry
- by participation and leadership in professional and disciplinary associations

Implicit in this mission is the imperative of education and inquiry based on the content, users and media (technologies) of information, with access being central to all activities.

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Goals

1. Create an environment for the development of each student's knowledge base, rooted in the theoretical foundation of the discipline within the context of a user-centered approach to professional practice.
2. Extend the knowledge base of library and information science and its application through research, outreach and scholarship centered around the interaction among and access to content, media and users.
3. Provide leadership in the state and nation to define essential questions and solve critical problems in the discipline of library and information science.

Library Science MA Plan of Study

Your program consists of required and elective course work, observational and practical experiences and opportunities to work as a member of a research and development team. Students seeking certification as a school librarian/media specialist need to meet the certification requirements in place at the time of graduation.

Remaining in Good Standing

The courses used in the program for the master's degree must be no older than 8 years. At the end of each semester, graduate students with a cumulative GPA below 3.0 are placed on probation. If at the end of the following semester the cumulative GPA is 3.0 or better, the probationary status is removed. A student on probation failing to raise the cumulative GPA to 3.0 may, on the recommendation of the department or area program, be allowed a second and final probationary semester. A student is subject to dismissal upon failure to raise the cumulative GPA to 3.0 by the end of the second probationary semester, or at any time a semester/term or cumulative GPA falls below 2.0. In addition, the receipt of 2 course grades of C or lower will result in dismissal from the program.

Library Science MA Comprehensive Examination

Every library science degree student must complete a written comprehensive examination. The examination structure will include 4 general areas of concentration:

- Issues in Library and Information Science
- Information Technology
- Management of Information
- Services

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Educational Technology M Ed or EdSp

Admission Contact Information

SISLT Student Coordinator's Office
304 Townsend Hall
Columbia, MO 65211
Phone: 573-884-2670 or toll free 877-747-5868
Email: sislt@missouri.edu

Admission Criteria

- Deadline for Fall entrance: May 1
- Deadline for Spring entrance: October 1
- Deadline for Summer entrance: March 1
- Minimum TOEFL score (non-native English speakers): 500 for paper-based test, 173 for computer-based test or 61 for internet-based test
- Minimum GRE score: 500 Verbal, 500 Quantitative, 3.5 Writing
- Undergraduate GPA of at least 3.0 in the last 60 credit hours of the degree

Required Application Materials

To the Graduate School:

- All required Graduate School documents, including the online graduate application and bachelor's transcripts

To the Educational Technology M Ed or EdSp Program (http://education.missouri.edu/SISLT/EdTech/index.php):

- Statement of Purpose (can also be uploaded into Graduate School online application)
- Curriculum Vitae or Résumé
- 2 letters of reference
- GRE scores
- Any supporting materials

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

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About the Educational Technology M Ed and EdSp Programs

The Educational Technology (EdTech) emphasis area at MU is your portal to excellence and leadership in designing, developing, and implementing technology in education, training and performance support.

Two focus areas are available for your degree. Students who focus on Learning Systems Design & Development learn to plan and create the learning and performance support resources used by individuals, groups, and organizations. Students who focus on Technology in Schools learn the strategies and processes for advancing the use of new technologies in schools, colleges, and other learning environments, (e.g., virtual schools; online courses).

Working with an academic advisor, each student develops a customized program of study. You pick the professional goal that makes sense to you, and the EdTech faculty will help you transform your goal into your reality. For more details, please visit: http://EdTech.missouri.edu.

Educational Technology M Ed or EdSp Plan of Study

The Educational Technology program is available at the master's (M Ed) and educational specialist (EdSp) levels. The M Ed consists of 31 graduate credit hours. The EdSp is a 30 credit hour option and is available for students who already have a master's degree. The Educational Technology curriculum allows you to customize your course work by focusing on technology design and development or technology implementation.

Educational Technology Careers

Your degree in Educational Technology will open an array of career options. Some graduates work in K-12 schools, others work in corporations, and still others apply their skills in government, healthcare, higher education, and other settings. For example, some of our recent graduates are Software Designers and Developers, Learning Strategy Managers, Adaptive Technology Specialists, Training Designers, School Technology Coordinators, and Online Instructors. Whatever the setting, you will graduate with a skill set that will serve you well in the future.

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Doctorate in Information Science & Learning Technologies

Admission Contact Information

SISLT Student Coordinator's Office
304 Townsend Hall
Columbia, MO 65211
Phone: 573-884-2670 or toll free 877-747-5868
Email: sislt@missouri.edu

Admission Criteria

- Deadline for Fall entrance: February 15
- Deadline for Spring entrance: September 15
- Minimum TOEFL score (non-native English speakers): 500 for paper-based test, 173 for computer-based test or 61 for internet-based test
- Minimum GRE score: 500 Verbal, 500 Quantitative, 3.5 Analytical Writing
- Undergraduate GPA of at least 3.0 in the last 60 credit hours of the degree
- Graduate GPA of 3.5

In addition to meeting admission requirements, all students applying to the PhD program must complete faculty interviews and documentation of their research, development interests and capabilities. If you do not meet these standards, you should provide evidence of exceptionality in one or more other categories.

Required Application Materials

To the Graduate School:

- All required Graduate School documents, including the online graduate application and bachelor's transcripts

To the Doctorate in Information Science & Learning Technologies Program (http://education.missouri.edu/SISLT/PhD/index.php):

- Statement of Purpose (can also be uploaded into Graduate School online application)
- Curriculum Vitae or Résumé
- 3 letters of reference
- GRE scores
- Any supporting materials (i.e. published papers or technical reports)

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Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

About the Program

The PhD program prepares professionals to understand and influence learning, information and performance in diverse settings, especially through the use of interactive technologies. We seek individuals who are committed to conducting research that integrates theory and practice.

You will gain the competencies required to:

- Analyze specific informational organization and retrieval, learning and performance needs and evaluate systems to meet these needs.
- Design, develop and implement technologies and technological interventions to improve information organization and retrieval, learning and performance.
- Conduct systematic research, which contributes to the knowledge base of learning, information organization and retrieval, performance and/or technology.

Plan of Study

Course work, internships and independent study projects support the achievement of these competencies, and your program centers on producing a portfolio of achievements indicating that the competencies have been attained. While course work supports production of the portfolio, we encourage students to develop products that cut across several courses, resulting in products that are personally satisfying, solve real problems and represent high quality work. We are particularly interested in products developed in collaboration with other students, practicing professionals and others beyond our program and campus.

Research

The program culminates with a significant research effort that contributes to the knowledge base of learning, information organization and retrieval, performance and/or technology. Whether one major study or a series of smaller studies, the research is designed to position our graduates alongside the leading theorists, researchers and practitioners in the field. There is no minimum number of 9090 research hours.

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Courses

See Information Science & Learning Technologies (IS LT) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

International Development Graduate Minor

Contact Information

Dr. Corinne Valdivia
214D Mumford Hall
573-882-4020
valdiviac@missouri.edu

About the Interdisciplinary Minor

All graduate students at MU, regardless of department, are eligible to work toward the Interdisciplinary Minor in International Development. Students who complete the minor successfully will have this noted on their transcripts and be awarded a Certificate in International Development.

Interested students should contact Corinne Valdivia, PhD, director of the minor and associate professor of agricultural economics.

Plan of Study

The requirements for acceptance and completion of work for the minor are as follows:

1. The student must be enrolled as a master's or PhD candidate in good standing at MU.

2. A formal request (Form-1) to be included in the minor must be made in advance of taking courses, to the director, Associate Professor Corinne Valdivia, 214D Mumford Hall. This request should be approved by the student's adviser. A copy will be sent to the Graduate School.

3. Once the student is admitted to the minor, s/he should seek advisement from the director and his/her adviser concerning which courses to take. Effective Fall 2005 the plan of study must be submitted to the Graduate School no later than the semester before graduation.

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4. The student must satisfactorily complete a total of twelve credit hours in courses dealing with Third World Development. At least six of the twelve hours must be taken in at least two departments outside the student's home department.

5. Foreign language courses are not required, but students who are not fluent in a second language are strongly encouraged to take intensive language courses to develop competency. Credit for language courses does not count toward the twelve hours of credit required for the minor.

6. When the required twelve hours of credit are completed from approved courses, the student's adviser should inform the director by completing Form-2. The director will inform the Graduate School. This should be done in advance of the student's orals to give members of the Minor's policy committee an opportunity to sit in on the examining committee if they so desire.

7. The certificate is only awarded after all departmental and Graduate School requirements for the advanced degree have been satisfied. An overall grade point average of 3.0 is required for the twelve hours within the minor.

Qualifying Courses

Students enrolled in the minor should check with the director to determine what courses they should take. Credit cannot be given for courses not on this list without approval by the director.

AG EC 8430	International Agricultural Development Policy (3)
ECONOM 7325	The International Monetary System (3)
ECONOM 7326	Economics of International Trade (3)
ECONOM 7360	Economic Development (Requisite: Econ 7351) (3)
ECONOM 9460	Development Economics (3)
ED 9459	International Education and National Development (3)
HIST 8445	Readings in World Environmental History (3)
JOURN 7658	International Journalism (2)
JOURN 7656	International News Media System (3)
POL SC 7640	African Politics (3)
POL SC 9610	Latin American Politics (3)
POL SC 9790	Seminar in Comparative Politics (3)

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PUB AF 8630	Organizational Change in a Community and Global Context (3)
RU SOC 8287	Seminar in Social and Economic Development (3)
RU SOC 7335	Social Change and Trends (3)
RU SOC 7445	Seminar in Issues of Agriculture and Natural Resources (3)
RU SOC 9480	Quantitative Applications in Community Research (3)
SOC WK 7455	Latino/a Immigrants and Receiving Communities (3)
SOCIOL 7230	Women, Development and Globalization (also W&GST 7230) (3)
TAM 9150	International Trade in Textiles and Apparel (3)
ANTHRO 7300	Comparative Social Organization (3)
ANTHRO 7320	Ecological and Environmental Anthropology (3)

Selected Departments 7085/8085 Problems (1-3)

Selected Departments 7001/8001 Advanced Topics

Courses

Courses may be added or deleted from time to time. All courses are not necessarily offered every year. See course descriptions in the myZou online system.

END OF PROGRAM DESCRIPTION

Journalism Graduate Programs

Contact Information

School of Journalism
179 Gannett Hall
573-882-4852
http://www.journalism.missouri.edu/ (school)
http://www.journalism.missouri.edu/graduate/ (graduate programs)

About Journalism

The Missouri School of Journalism awarded the first master's and doctoral degrees in journalism in 1921 and 1934, respectively. The master's and doctoral programs at the School enjoy superb reputations, both among scholars and among practitioners in news, advertising, public relations and strategic communication.

For the master's program, Missouri Journalism offers as complete a set of real-media experiences. We operate the only network affiliate (NBC) television station in the country used to train journalism students. We publish a community daily newspaper (not a campus paper), and we operate four major Web sites, a local magazine and an international magazine.

Our strategic communication students design media campaigns for local and national clients. Our students have created advertising and public relations campaigns for Nokia, Apple, Dr Pepper, Anheuser-Busch, Duncan Hines, DuPont, Dow Chemical, Kinko's, Eastman Kodak and many other leading international brands.

We operate educational programs in Washington, D.C., and New York, where many of our students carry out their capstone projects or do research. We also partner with educational programs around the world.

Facilities and Resources

A variety of special facilities and resources are available to help students meet their educational objectives. The Columbia Missourian, a general circulation daily newspaper with full-leased wires of The Associated Press and The New York Times Service, KOMU-TV, an NBC

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affiliate, KBIA-FM, a National Public Radio station, Mojo Ad Agency and Vox Magazine provide students the opportunity to learn while doing under faculty supervision and to conduct applied research.

The Journalism Library subscribes to more than 125 newspapers and magazines worldwide and catalogs more than 40,000 volumes. Many more resources are available in electronic format.

The State Historical Society of Missouri, which is on campus, has an extensive collection of state newspapers dating from 1808.

The Freedom of Information Center maintains a day-to-day study of the actions by government, media and society affecting the movement of information.

The national headquarters of Investigative Reporters and Editors and the National Institute for Computer Assisted Reporting provide educational services to reporters, editors and others interested in investigative journalism.

The Service Journalism program, based in the magazine sequence, focuses on how to effectively provide information to consumers and offers workshops for professionals, covering such topics as health and nutrition, travel, science and minorities coverage.

The Center for Advanced Social Research provides survey and other services to a broad variety of governmental, corporate and media organizations. It employs more than 50 graduate students from around the MU campus.

Founded in 2003 with a generous gift from the Donald. W. Reynolds Foundation, the Reynolds Journalism Institute is committed to developing and testing new ways to improve journalism through new technology and improved processes.

Special Events

Each year the school sponsors the Honor Medal Award program, which brings contemporary leaders in mass communications to the campus. The school also directs a number of professional development and

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awards programs, including the international competition for the best Pictures of the Year.

Honor Society
Kappa Tau Alpha, national honor society for scholarship in journalism founded at the university in 1910, has its headquarters in the school.

Funding
An array of competitively awarded fellowships, assistantships, scholarships and other financial aid opportunities are available. All applicants for admission are considered for any available funding. No separate application form is needed.

Journalism Faculty

R. Dean Mills
dean, professor, PhD, University of Illinois.

Esther Thorson
associate dean for graduate studies and research, professor, PhD, University of Minnesota.

Jeanne Abbott
associate professor, PhD, University of Missouri.

William Allen
assistant professor, MA, University of Illinois.

Jacqui Banaszynski
professor, MA, Marquette University.

Jackie Bell
associate professor, MA, Ohio University.

Clyde Bentley
associate professor, PhD, University of Oregon.

Mary Kay Blakely
associate professor, MA, Northern Illinois University.

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Paul Bolls
associate professor, PhD, Indiana University.

Greg Bowers
associate professor, MA, Western Washington University.

Brian S. Brooks
associate dean of undergraduate studies, professor, MA, University of Missouri.

Phillips Brooks
associate professor, MA, University of Missouri.

Glen Cameron
professor, PhD, University of Texas-Austin.

Jan Colbert
associate professor, MA, University of Missouri.

Stephanie Craft
associate professor, PhD, Stanford University.

Frederick W. Cropp
associate professor, PhD, University of Missouri.

Sandra Davidson
associate professor, PhD, University of Connecticut-Storrs.

Charles Davis
associate professor, PhD, University of Florida.

Margaret Duffy
associate professor, Ph.D., University of Iowa.

Holly Edgell
assistant professor, BA, Michigan State University.

John Fennell
associate professor, MFA, University of Wisconsin-Milwaukee.

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Cynthia Frisby
associate professor, PhD, University of Florida.

B. Keith Greenwood
assistant professor, PhD, University of Missouri.

Michael Grinfeld
associate professor, JD, New England School of Law.

Gary Grigsby
associate professor, MA, University of Missouri.

Suzette Heiman
associate professor, MA, Truman State University.

Andrea Heiss
assistant professor, PhD, University of Iowa.

David Herzog
associate professor, BA, Temple University.

Amanda Hinnant
assistant professor, PhD, Northwestern University.

Berkley Hudson
associate professor, PhD, University of North Carolina-Chapel Hill.

Lynda Kraxberger
associate professor, MA, University of Missouri.

Greeley Kyle
assistant professor, MA, University of Memphis.

Maria Len-Rios
associate professor, PhD, University of Missouri.

Glenn Leshner
professor, PhD, Stanford University.

continued on next page

Debra Mason
professor, PhD, Ohio University.

Michael McKean
associate professor, MA, Rice University.

Daryl R. Moen
professor, MA, University of Minnesota.

Earnest L. Perry
associate professor, PhD, University of Missouri.

Wes Pippert
associate professor, MA, Wheaton College.

Katherine Reed
assistant professor, MA, Hollis University.

Rita Reed
associate professor, MA, University of Missouri.

David Rees
associate professor, MA, University of Missouri.

Jennifer Reeves
associate professor, MA, Aquinas College.

Randy Reeves
associate professor, MA, University of Missouri.

Shelly Rodgers
associate professor, PhD, University of Missouri.

Jennifer Rowe
associate professor, MA, University of Missouri.

Janet Saidi
assistant professor, MA, University College (London).

continued on next page

Karon Speckman
adjunct associate professor, PhD, University of Missouri.

Martha Steffens
professor, BA, Indiana University.

Yong Volz
assistant professor, PhD, University of Minnesota.

Timothy Vos
assistant professor, PhD, Syracuse University.

Margaret Walter
associate professor, MA, Ball State University.

Thomas Warhover
associate professor, BJ, University of Missouri.

Lee Wilkins
professor, PhD, University of Oregon.

Betty Winfield
professor, PhD, University of Washington.

Kevin Wise
associate professor, PhD, Stanford University.

Stacey Woelfel
associate professor, PhD, University of Missouri.

Master of Arts in Journalism

Admission Contact Information
Ginny Cowell (cowellvj@missouri.edu)
179 Gannett Hall; Columbia, MO 65211
573-882-4852
http://www.journalism.missouri.edu/graduate/masters/

Admission Criteria
Campus program deadlines:

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Fall deadline: January 1
Spring deadline: September 1
Online program deadlines:
Fall deadline: July 1
Spring deadline: November 15
Summer deadline: April 15

- Minimum IELTS score 7.0
- Minimum TOEFL score: 600/250/100 (paper/computer/internet)
- Minimum GRE score: V+Q=1100
- Minimum GPA: 3.0 in last 60 hours

If the GPA (cumulative or last 60 hours, whichever is higher) is between 3.0 and 3.2, the GRE score must be at least 1100. A score of 1000 may be acceptable for those with a GPA of greater than 3.2. Deadlines are adhered to strictly, and no applicant is considered for admission until all required information is received.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Journalism Master's Program:
Domestic Applicants
International Applicants

Please upload the following application materials into the online Graduate School application in Apply Yourself:

- Departmental application (click to visit and download)
- 3 essays as specified on Departmental application
- Résumé
- 3 letters of recommendation (use the online Graduate School application system)

Please submit 2 hard copy sets of official transcripts and official GRE scores to:
Earl English Graduate Studies Center
Missouri School of Journalism
University of Missouri
179 Gannett Hall
Columbia, MO 65211-1200

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Financial Aid from the Program

Limited fellowships, assistantships, scholarships and other financial aid opportunities are available. All applicants for admission are considered for any available funding. No separate application form is needed. Check the program Web site or ask the program contact for details.

About the Master of Arts

The program leading to the MA degree is designed to accommodate several objectives, including: comprehensive professional preparation for careers in the news media and mass communications; expansion of previous professional preparation and experience (e.g. newspaper editing) into a new area (e.g. broadcasting reporting); comprehensive academic preparation for careers in journalism teaching and research; and combinations of the three.

Degree Options

Program Models

Students choose from more than 20 program models, covering the full range of skills and media of journalism. Because the faculty periodically updates these models, students should visit the school's Web site for the latest details. In addition to the course work in any model, students complete either a thesis or a professional project. Students who make progress on the degree requirements and maintain at least a B average each semester are considered to be in good standing.

Five-year Bachelor to Master's Program

Another option for students who seek a master's degree is the 5-year bachelor to master's program. To be eligible for this option, students must have completed a bachelor's degree in journalism from Missouri. Students following the 5-year plan are expected to carry at least 10-12 hours per semester and will graduate in one calendar year. Only graduates of Missouri Journalism School's undergraduate program are eligible for the 5-year program.

Dual Journalism and Law Programs

The School of Journalism and the School of Law have created dual programs that provide an opportunity to earn a MA in Journalism and either a JD or an LLM from Law with an emphasis in conflict resolution. Students in the joint programs complete one of the journalism models

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and the course requirements for the law degree with a block of courses that are used for both degrees.

Distance Learning
Professional journalists or others who cannot travel to mid-Missouri to attend the on-campus program might consider doing their program in an online format. Media management and strategic communication models are available through distance learning to applicants who have a minimum of three years professional journalism-related experience. Students in the online program are required to make two short visits, two to three days each, to campus during their program. You can find more information about the online masters programs at http://journalism.missouri.edu/graduate/online/.

Plan of Study
Students must complete undergraduate courses in news and editing or their equivalent as determined by the admissions committee. Students who verify professional experience may be excused from these requirements with permission from the associate dean for graduate studies.

Two-year students are required to complete a minimum of 37 to 41 hours (depending upon area of specialization), at least half of which must be in 8000-level courses. Five-year BJ-MA students complete a minimum of 30 hours. Specific course requirements vary depending on the option selected.

Professional Project or Thesis
Students must enroll in either the Project Seminar or the Thesis Seminar and develop proposals for their professional project or thesis. During the Project or Thesis Seminar, they must also write an integrative introduction, which discusses the interconnections among the courses they have taken and provides a rationale for the combination of courses that compose the degree. After proposal approval, students earn an additional nine credit hours for either the professional project or thesis research.

Students in any model may choose to complete the professional project or thesis off campus. The school operates a Washington program with full time faculty members, headquartered in the National Press Building.

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In the Missouri state capital, the school has a program, also staffed by full time faculty, that has as its focus public affairs reporting in any medium. Other off-campus opportunities can be arranged.

Length of Study
The degree must be earned within eight years of beginning the program.

Doctorate in Journalism

Admission Contact Information
Ginny Cowell (cowellvj@missouri.edu)
179 Gannett Hall; Columbia, MO 65211
573-882-4852
http://www.journalism.missouri.edu/graduate/doctoral/

Admission Criteria
- Fall deadline: December 15
- Spring deadline: September 1
- Minimum TOEFL score: 600/250/100 (paper/computer/internet)
- Minimum GRE score: V+Q=1100
- Minimum GPA: 3.0; 3.5 in graduate work
- At least two years of full-time professional media or strategic communication experience (College-level teaching does not meet this requirement.)

Applicants should have demonstrated interest, education or professional experience in journalism, advertising, public relations, mass communication or a related field. A degree (bachelor's or master's) in one of those fields or at least two years of full-time professional media experience is preferred. All required information must be received before the admission review can begin. Applicants may be required to participate in an interview with the doctoral faculty as part of the review process. Students who did not write a thesis in their master's program may be required to complete a project to demonstrate their ability to do independent research.

Deadlines for application are December 15 for fall entry and September 1 for spring. Deadlines are firm, and no applicant is considered for admission until all required information is received.

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Required Application Materials
To the Graduate School:
- All required Graduate School documents

To the Journalism Doctoral Program:
Domestic Applicants
International Applicants

Please upload the following application materials into the online Graduate School application in Apply Yourself:
- Departmental application (click to visit and download)
- Statement of Doctoral Objectives
- Résumé
- 3 letters of recommendation (use the online Graduate School application system)

Please submit 2 hard copy sets of official transcripts and official GRE scores to:
Earl English Graduate Studies Center
Missouri School of Journalism
University of Missouri
179 Gannett Hall
Columbia, MO 65211-1200

Financial Aid from the Program
Doctoral students are provided assistantship and scholarship support for a maximum of six terms (three years). Contact the department for details on this financial assistance.

About the Doctorate
The objective of the doctoral program is to develop an ability to conduct independent and advanced scholarly research and to integrate this skill with a depth of scholarship in journalism and mass communication. Although it is primarily a research degree, the PhD is designed to facilitate a variety of academic aims. Students must expand their intellectual horizons, gain a theoretical framework for examining and understanding communication and refine their own communication competencies.

Plan of Study
Doctoral study in journalism and mass communication is an

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interdisciplinary enterprise. The doctoral program is designed by the student in collaboration with the adviser and doctoral committee. Course selections are based on the intellectual requirements of the dissertation and the teaching areas the student wishes to pursue. No courses that focus primarily on professional skills may be counted toward the doctoral program, whether taken at the master's or the doctoral level. Courses from journalism should compose no more than two-thirds of the total credit.

Students must develop two research tools, pass qualifying and comprehensive examinations, submit and defend a dissertation, and satisfactorily meet all other requirements of the Graduate School. Doctoral Proseminar I (JOURN 9000), Doctoral Proseminar II (JOURN 9006), Doctoral Seminar (JOURN 9010) and Doctoral Research Seminar (JOURN 9087) are required of all PhD students.

Qualifying Examination
Students are admitted to the PhD program in journalism when they have passed the doctoral seminar (qualifying examination), which must be taken the semester in which the student completes 18 hours. Graduate School regulations about comprehensive examinations, dissertations, plans of study, residency and other matters are specified in the Degree Requirements section of the catalog.

Foreign Language & Research Tool Requirements
Students are expected to have a background in a foreign language and to develop a research tool. The language requirement may be met by three semesters of college-level foreign language courses or an equivalency acceptable to the doctoral faculty. At the discretion of the student's doctoral committee and the associate dean for graduate studies, a second tool may be used to substitute for the language requirement.

There are four research tool options:

1. competency in a second foreign language. This may be satisfied by two years of college-level work recently passed with a grade of C or better or an acceptable ETS score. A foreign language is one that is non-native or not the primary language used in the student's school system;

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2. computer proficiency as evidenced by completion of two computer courses or an equivalency acceptable to the doctoral faculty;
3. two courses in statistics;
4. two 7000 or 8000-level research methods courses outside the School of Journalism.

A grade of A or B must be made in any course used for options 2, 3 or 4.

Teaching
Doctoral students who plan to teach will participate in a teaching program. Each student's teaching skills will be evaluated in Doctoral Seminar, at which point planning for the student's future teaching opportunities begins. Most students will serve as teaching assistants in such classes as JOURN 1100, 2100, and 3000 during their third semester in the program.

In the student's fourth semester, he/she may have an additional teaching experience, either as a teaching assistant, co-instructor or instructor of record in a course. Depending on the student's ability and desire, students might teach a course independently during later semesters.

Courses

See Journalism (JOURN) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Learning, Teaching, & Curriculum Graduate Programs

Contact Information

Department of Learning, Teaching, & Curriculum
303 Townsend
573-882-6462
573-884-2917 (fax)
http://education.missouri.edu/LTC/

About the Program

Graduate study in Learning, Teaching, & Curriculum prepares teachers, curriculum leaders and teacher educators for professional excellence. With the rapid changes in education--especially developments in instructional materials and techniques, curriculum construction and classroom organization--teachers who have completed their certification may need to update, refine and extend their knowledge and skills.

Further, many educators enter new roles as subject-matter specialists, curriculum coordinators, supervisors of instruction, department heads, leaders of in-service education or teacher educators. Graduate programs in Learning, Teaching, & Curriculum are designed to prepare the professionals for these new roles.

Areas of Study

Majors can elect an area of concentration in curriculum development and research, or teacher education. Concentration areas in disciplines outside professional education, such as economics, management and sociology, also may be chosen.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

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Learning, Teaching, & Curriculum Faculty

Irv Cockriel
interim chair, professor, PhD, University of Missouri. Counseling psychology.

James Baumann
Chancellor's Chair for Excellence in Literacy Education and Professor, PhD, University of Wisconsin-Madison. Reading education.

Sandra K. Abell
Curators' Professor, PhD, University of Iowa. Science education.

Robert E. Reys
Curators' Professor, EdD, University of Missouri. Mathematics education.

Barbara Reys
Lois Knowles Distinguished Professor, PhD, University of Missouri. Mathematics education.

Lloyd H. Barrow
director of graduate studies, professor, PhD, University of Iowa. Science education.

Roy Fox
professor, PhD, University of Missouri. English education.

Adrienne Hoard
professor, PhD, University of Illinois. Art education.

Stuart Palonsky
professor, PhD, Michigan State University. Social studies education.

Richard D. Robinson
professor, EdD, University of Georgia. Literacy education.

Wendy Sims
professor, PhD, Florida State University. Music education.

Douglas A. Grouws
research professor, PhD, University of Wisconsin. Mathematics education.

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Elizabeth Baker
associate professor, EdD, Vanderbilt University. Literacy education.

Linda Bennett
associate professor, EdD, University of Northern Colorado. Social studies education.

Kathryn Chval
associate professor, PhD, University of Illinois-Chicago. Mathematics education.

Patricia Friedrichsen
associate professor, PhD, Pennsylvania State University. Science education.

Carol Gilles
associate professor, PhD, University of Missouri. Literacy education.

Deborah Hanuscin
associate professor, PhD, Indiana University. Science education.

Nancy Knipping
associate professor, PhD, Southern Illinois University. Early childhood education.

John Lannin
associate professor, PhD, Illinois State University. Mathematics education.

James E. Tarr
associate professor, PhD, Illinois State University. Mathematics education.

Kathy Unrath
associate professor, PhD, University of Missouri. Art education.

Mark Volkmann
associate professor, PhD, Purdue University. Science education.

Antonio (Tony) J. Castro
assistant professor, PhD, University of Texas. Social studies education.

continued on next page

Oscar Chavez-Lopez
assistant professor, PhD, University of Missouri. Mathematics education.

Candace Kuby
assistant professor, PhD, Indiana University. Literacy education.

Marci Major
assistant professor, PhD, Ohio State University. Music education.

Rachel Pinnow
assistant professor, PhD, University of Georgia. Teaching additional languages (TAL).

Lenny Sanchez
assistant professor, PhD, Indiana University. Literacy education.

Marcelle Siegel
assistant professor, PhD, University of California at Berkeley. Science education.

Brian Silvey
assistant professor, PhD, University of Texas-Austin. Music education.

Tony Barbis
assistant professor of teaching, PhD, University of Missouri. Human resource education.

Laurie Kingsley
assistant professor of teaching, PhD, University of Missouri. Literacy education

Amy Lannin
assistant professor of teaching, PhD, University of Missouri. English education.

Jill Ostrow
assistant professor of teaching, EdD, University of Maine. Literacy education.

Belinda Smith
assistant professor of teaching, PhD, University of Missouri. Art education.

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Master's and Educational Specialist Degrees

M Ed (32 hrs) in Learning, Teaching, & Curriculum and Career and Technical Education with the following emphasis areas: Art Education, Business & Marketing Education, Early Childhood Education, Elementary Education, English Education, Learning and Instruction, Literacy Education, Mathematics Education, Music Education, Science Education, and Social Studies Education.

MA (30 hrs) in general Learning, Teaching, & Curriculum and Music Education.

EdSp in Learning, Teaching, & Curriculum with the following emphasis areas: general Learning, Teaching & Curriculum, Mathematics Education, Music Education, Reading Education, and Science Education.

Doctoral Degrees

PhD in Learning, Teaching, & Curriculum. The following emphasis areas: Art Education, Early Childhood Education, Elementary Education, English Education, Literacy Education, Mathematics Education, Music Education, Science Education, and Social Studies Education.

EdD in Elementary Education, Literacy Education, and general Learning, Teaching, & Curriculum.

Application and Admission Information

Contact Information

Fran Colley (colleyf@missouri.edu)
303 Townsend Hall; Columbia, MO 65211
573-882-6462

Admission Criteria

PhD Admissions deadlines:

- Fall deadline: December 1
- Spring deadline: October 1
- Summer deadline: February 1

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International Admissions deadlines (Master's):
- Fall deadline: March 1
- Spring deadline: October 1
- Summer deadline: February 1

Master's and Specialist deadlines (non-international):
- Fall deadline: May 1
- Spring deadline: October 1
- Summer deadline: March 1

PLEASE NOTE: Application packets will be prepared for committee by these deadline dates. Application Review Meetings are not the same day as the deadline date. Only completed applications will be reviewed by the Graduate Admissions Committee. Applications for admissions decisions take at least 6 weeks to process.

- Minimum TOEFL score: 79 IBT
- Minimum GRE score: varies by program areas (general minimum is a combined verbal and quantitative score of 810+. Not all programs require the GRE exam; the following programs require the GRE for consideration into the program: Early Childhood Education, English Education (including TESOL focus), Mathematics Education, Science Education, and Social Studies Education.)
- Completion of an appropriate preliminary degree with a GPA of 3.0 or better (master's applicants: completion of bachelor's degree; Specialist applicants: completion of master's degree)
- Evidence of at least 2 years of successful experience in an appropriate field

Required Application Materials

To the Graduate School:
- All required Graduate School documents

To the Learning, Teaching, & Curriculum Program:
- Official transcripts
- Personal data sheet form (select appropriate form from the department website)
- Statement of purpose
- GRE scores
- 3 letters of recommendation (use the departmental cover sheet); check with department to see if they are required for your emphasis.

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Contact Information
Fran Colley (colleyf@missouri.edu)
303 Townsend Hall; Columbia, MO 65211
573-882-6462

Admission Criteria
PhD Admissions deadlines:

- Fall deadline: December 1
- Spring deadline: October 1
- Summer deadline: February 1

- Minimum TOEFL score: 79 IBT for most programs; 100 IBT required for Early Childhood, English Education, Mathematics Education, and Social Studies Education
- Graduate GPA above 3.5, GRE V+Q 900 or better, GRE essay score of 3.5 or better, or
  Graduate GPA above 3.2, GRE V+Q of 1000 or better, GRE essay score of 3.5 or better
- Minimum 2 years of full-time appropriate teaching or professional experience
- A preliminary examination and correspondence with doctoral faculty members may also be required

Required Application Materials
To the Graduate School:

- All required Graduate School documents

To the Learning, Teaching, & Curriculum Program:

- Personal data sheet form (select appropriate form from the department website or email the department contact for a PDF form.)
- Statement of purpose
- GRE scores
- 3 letters of recommendation (use the departmental cover sheet)

Financial Aid from the Program
Internal assistantships, fellowships or other funding packages require a departmental application, starting Fall 2010, and must be completed every semester in order to have funding renewed. Completion of the application does not guarantee renewal. Check the program Web site or ask the program contact for details.

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Courses

See the following Learning, Teaching, & Curriculum graduate courses in the myZou online system.

LEARNING, TEACHING, & CURRICULUM (LTC)
LEARNING, TEACHING & CURR – VOCATIONAL (LTC V)

END OF PROGRAM DESCRIPTION

Linguistics Graduate Minor

Contact Information

College of Arts and Science
107 Tate Hall
573-882-8814
http://linguistics.missouri.edu/

About Linguistics

Linguistics is the study of human language. It seeks to understand and explain the social, psychological, and structural properties of human language in a clear and formal manner. Although specialists often know more than one language, such knowledge is complementary rather than essential.

Graduate degrees are not offered, but a Graduate Minor in Linguistics can be taken. MA and PhD degree programs with emphasis in linguistics and language are available in some cooperating departments (anthropology, communication, English, romance languages, philosophy). The linguistics area program is staffed by faculty from various departments.

Eligibility for Linguistics Minor

A graduate minor field in Linguistics is available to graduate students.

Funding

Financial aid, when available, is arranged through the participating departments.

Linguistics Faculty

Asier Alcazar,
assistant professor of Spanish, PhD, University of Southern California.

Vicki Carstens,
chair of linguistics, associate professor of English, PhD, University of California-Los Angeles.

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Linda Day,
research assistant professor of communication science and disorders, PhD, University of Missouri.

John M. Foley,
professor of English and classical studies, PhD, University of Massachusetts.

Judith Goodman,
associate professor of communication science and disorders, PhD, University of Chicago.

Matthew Gordon,
associate professor of English, PhD, University of Michigan-Ann Arbor.

Claire Horisk,
assistant professor of philosophy, PhD, University of North Carolina-Chapel Hill.

Johanna Kramer,
assistant professor of English, PhD, Cornell University.

Matthew McGrath,
associate professor of philosophy, PhD, Brown University.

Loreen N. Olson,
assistant professor of Communication, PhD University of Nebraska-Lincoln.

Philip Robbins,
associate professor of philosophy, PhD, University of Chicago

Paul Weirich,
professor of philosophy, PhD, University of California-Los Angeles.

John Zemke,
professor of Spanish, PhD, University of California-Davis.

Flore Zéphir,
professor of French and African diaspora studies, PhD, Indiana University-Bloomington.

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Emeritus Faculty

N. Louanna Furbee,
professor emerita of anthropology, PhD, University of Chicago.

Daniel E. Gulstad,
professor emeritus of Spanish, PhD, University of Illinois.

Benjamin L. Honeycutt,
associate professor emeritus of French, PhD, The Ohio State University.

Mary-Jeanette Smythe,
professor emerita of communication, PhD, Florida State University.

Dorothy Watson,
professor emerita of learning, teaching and curriculum, PhD, Wayne State University.

Gilbert Youmans,
professor emeritus of English, PhD, University of Wisconsin-Madison.

Plan of Study

The minor is composed of 12 hours, two courses of which are required and two are to be selected from a list of upper level linguistics classes:

Required
* LINGST 7630: Phonology(3).
* LINGST 7640: Syntax(3).

Sample list from which two additional courses will be selected
Appropriate substitutes may be accepted at the discretion of the chair.
* LINGST 7600: Structure of American English (3)
* LINGST 7610: History of the English Language (3)
* LINGST 7620: Regional and Social Dialects of American English (3)
* LINGST 7400: Language and Culture (3)
* LINGST 7810: Psycholinguistics (3)
* LINGST 7870: Field Methods in Linguistics (4)

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For additional Information
Professor Vicki Carstens, Chair
316G Tate Hall
573-882-8814
Send email to Dr. Carstens.

Courses

See Linguistics (LINGST) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Mathematics Graduate Programs

Contact Information

College of Arts and Science
202 Mathematical Sciences Building
573-882-6221
http://www.math.missouri.edu/

About Mathematics

The Graduate Program in Mathematics is large enough to encompass research and courses in many areas, yet small enough to remain responsive to the needs of individual students. There are approximately 80 graduate students, 40 professors, and 15 postdoctoral and visiting researchers. The active areas of research include: algebraic geometry, analysis (real, complex, functional and harmonic), analytic functions, applied mathematics, financial mathematics and mathematics of insurance, commutative rings, scattering theory, differential equations (ordinary and partial), differential geometry, dynamical systems, general relativity, mathematical physics, number theory, probabilistic analysis and topology.

The Mathematical Sciences Building houses a library with more than 34,000 volumes and 430 journal titles. MU students have access to an extensive array of computing resources.

Mathematics Degrees Offered
http://www.math.missouri.edu/degrees/graduate/degrees.html

- Mathematics Master of Arts (MA)
- Applied Mathematics Master of Science (MS)
- Mathematics Doctor of Philosophy (PhD)
- Mathematics Master of Science for Teachers (MST)
- Dual Master's degree in Applied Mathematics and Economics
- Dual Master's degree in Applied Mathematics and Electrical Engineering

A list of graduate alumni and their research topics is available:
http://www.math.missouri.edu/alumni/index.html

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Financial Aid from the Program
http://www.math.missouri.edu/degrees/graduate/financial.html

All domestic applications for admission are automatically considered for financial support – in most cases by Teaching Assistantships. Virtually all current students are supported financially. Scholarships, assistantships, fellowships and other sources of aid are available. The Department Research Fellowship, the Blumenthal Scholarship and the McFarlan Fellowship are administered by the department, while the Huggins Scholarship, Gregory Fellowship and Ridgel Fellowship are administered by the university. International applications with TOEFL of 85 or higher (or equivalent) will also be automatically considered for departmental financial support.

Mathematics Faculty

http://www.math.missouri.edu/personnel/faculty.html

Glen Himmelberg
chair

Carmen Chicone
associate chair, professor, PhD, University of Wisconsin. Dynamical systems.

Dan Edidin
director of graduate studies, professor, PhD, Massachusetts Institute of Technology. Algebraic geometry.

Ian Aberbach
director of undergraduate studies, professor, PhD, University of Michigan. Commutative algebra.

Mark Ashbaugh
professor, PhD, Princeton University. Mathematical physics, differential equations.

Nakhle Asmar
professor, PhD, University of Washington. Harmonic analysis.

continued on next page

William Banks
professor, PhD, Stanford University. Cryptography, number theory.

Peter Casazza
professor, PhD, University of Iowa. Functional analysis.

Tanya Christiansen
professor, PhD, Massachusetts Institute of Technology. Scattering theory, partial differential equations.

S. Dale Cutkosky
Curators' Distinguished Professor, PhD, Brandeis University. Algebraic geometry.

Fritz Gesztesy
professor, PhD, University of Graz, Austria. Spectral theory and completely integrable systems.

Loukas Grafakos
professor, PhD, University of California-Los Angeles. Fourier analysis and applications.

Adam Helfer
professor, PhD, Oxford University. Geometry, mathematical physics.

Steve Hofmann
Curators' Distinguished Professor, PhD, University of Minnesota. Harmonic analysis, partial differential equations.

Nigel Kalton
Curators' Distinguished Professor, PhD, Cambridge University. Functional analysis.

Alexander Koldobsky
professor, PhD, Leningrad State University. Functional and harmonic analysis.

Yuri Latushkin
professor, PhD, Odessa University. Dynamical systems, operator semigroups.

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Charles Li
professor, PhD, Princeton University. Dynamical systems, partial differential equations.

Konstantin Makarov
professor, PhD, Leningrad (St. Petersburg) State University. Mathematical physics, spectral theory, partial differential equations, operator theory.

Dorina Mitrea
professor, PhD, University of Minnesota. Harmonic analysis, partial differential equations.

Marius Mitrea
professor, PhD, University of South Carolina. Harmonic analysis, partial differential equations.

Stephen Montgomery-Smith
professor, PhD, Cambridge University. Functional analysis.

Michael Pang
professor, PhD, London University. Elliptic partial differential equations.

Dix Pettey
professor, PhD, University of Utah. Point set topology, combinatorics.

Zhenbo Qin
professor, Columbia University. Algebraic geometry.

Hema Srinivasan
professor, PhD, Brandeis University. Commutative algebra.

Michael Taksar
professor, PhD, Cornell University. Mathematical finance, applied stochastic analysis.

Allanus Tsoi
professor, PhD, University of Alberta-Edmonton. Financial mathematics, mathematical

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Igor Verbitsky
Curators' Distinguished Professor, PhD, Kazan University. Harmonic analysis, probability.

Shuguang Wang
professor, PhD, Oxford University. Low-dimensional manifolds.

Qi Zhang
professor, PhD, Duke University. Algebraic geometry.

Stamatis Dostoglou
associate professor, PhD, University of Warwick. Mathematical physics.

Asma Harcharras
asssociate professor, PhD, University of Paris-six. Functional analysis.

Carlo Morpurgo
associate professor, PhD, Washington University. Harmonic analysis, spectral theory of partial differential operators.

Jan Segert
associate professor, PhD, Princeton University. Differential geometry, mathematical physics.

Dana Weston
associate professor, PhD, University of Illinois. Commutative algebra.

Calin Chindris
assistant professor, PhD, University of Michigan. Representations of Quivers, Invariant theory.

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Application and Admission Information

Admission Contact Information

Dan Edidin, director of graduate studies
202 Mathematical Sciences Building
Columbia, MO 65211
573-882-6221
E-mail: muasmathdgs@missouri.edu

Admission Criteria

http://www.math.missouri.edu/degrees/graduate/application.html

- Fall deadline: January 15
- Minimum TOEFL score: Same as the Graduate School minimum: http://gradschool.missouri.edu/admission/degree-seeking/international/

While a bachelor's degree from an accredited institution is required, the undergraduate major need not be mathematics as long as applicants have had sufficient mathematics training to qualify for 8000-level courses during the first three semesters of graduate work.

Required Application Materials

http://www.math.missouri.edu/degrees/graduate/application.html

- 3 or more letters of recommendation
- Transcripts
- Personal statement
- GRE scores (required for PhD application; strongly recommended for master's application)

Mathematics' Degree Requirements

http://www.math.missouri.edu/degrees/graduate/degrees.html

Mathematics Master of Arts (MA)

The degree requirements include the satisfactory completion of 30 hours of approved course work, of which at least 18 hours must be at the 8000 level. Math 8250, 8420, 8425, and 8410 are required, as is either 8190 or 8090. Students are expected to make up any required deficiencies in their undergraduate training in advanced calculus and abstract algebra. Students may list no more than two of the courses 7110, 7700, 7900, 7140, 7720 and 7920 on their graduate program.

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Furthermore, neither 7100 nor 7510 may be listed. The successful completion of a Master's Project (Math 8190) or Master's Thesis (Math 8090) must be certified by a Master's Committee consisting of three members of the Mathematics regular faculty.

Applied Mathematics Master of Science (MS)
Designed to give students training in those areas of mathematics used frequently in applications. A candidate must satisfactorily complete 30 hours of approved course work, at least 15 hours of which must be in 8000-level courses. Math 8420, 8445, 8425 and 8440 are required, as is either 8190 or 8090. At least three hours of the 30 hours must be taken outside the department. Additional requirements (some of which may be satisfied by work done as an undergraduate) include the completion of one year of advanced calculus and at least one approved course in each of the areas of linear algebra, numerical analysis and mathematical statistics or probability. Students may list no more than two of the courses 7110, 7700, 7900, 7140, 7720 and 7920 on their graduate program. Furthermore, neither 7100 nor 7510 may be listed. The successful completion of a Master's Project (Math 8190) or Master's Thesis (Math 8090) must be certified by a Master's Committee consisting of three members of the Mathematics regular faculty.

Mathematics Doctor of Philosophy (PhD)
This is a professional research degree designed to prepare students for various advanced professional careers, including college teaching and research. Before formally becoming a candidate, a student must have training equivalent to that required for a master's degree and must pass a qualifying examination shortly after beginning work at MU. The candidate must further complete a course of study approved by the doctoral program committee and pass a comprehensive examination. The active areas of research interest of the current members of the staff are: algebraic geometry, analysis (real, complex, functional and harmonic), analytic functions, applied mathematics, financial mathematics and mathematics of insurance, commutative rings, scattering theory, differential equations (ordinary and partial), differential geometry, dynamical systems, general relativity, mathematical physics, number theory, probabilistic analysis and topology.

Note: Effective at the start of Winter Semester 2007, there is NO foreign

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langauge proficiency requirement for the Mathematics PhD. However, a student's Doctoral Committee still retains the discretion to impose a foreign langauge proficiency requirement.

Mathematics Master of Science for Teachers (MST)
This degree is designed primarily for those who want to teach mathematics at the secondary school level. A candidate for the degree must have a valid teaching certificate before entering the program and must satisfactorily complete 30 hours of approved course work. Math 8190 or Math 8090 is required. At least 15 hours must be in 8000-level courses, of which at least 9 hours must be courses from the Mathematics Department. At least two courses are required in the fields of algebra, analysis and geometry/topology. The successful completion of a Master's Project (Math 8190) or Master's Thesis (Math 8090) must be certified by a Master's Committee consisting of three members of the Mathematics regular faculty.

Note: The MU College of Education at the University of Missouri is a separate academic unit offering graduate degrees in Mathematics Education, with an emphasis on learning, teaching, and curriculum development.

Dual Master's Degree in Applied Mathematics And Economics
The Departments of Mathematics and Economics offer selected students the option of obtaining a dual M.S. degree in applied mathematics and an M.A. degree in economics within an integrated program. Students enrolled in the dual master's degree program may obtain degrees based on 48 credit hours of course work. In each degree field a minimum of 18 hours of graduate courses is required.

The students are required to take from the Department of Mathematics: 8420; choose one of the following two courses: 8480 or 8445; and choose 4 more elective courses from the following list: 7300, 7310, 7500, 7700, 7900, 7320, 7520, 7140, 8445, 8425, 8440, 8480, 8680.

The students are required to take from the Department of Economics: 8451, 8453, 8472; one course from the following: 9473, 9475, 9476; and 2 elective courses, one of which must be a 9000-level course, selected from the following list: 7311, 7312, 7315, 7316, 7322, 7325, 7326, 7329, 7340, 7355, 7360, 7361, 7362, 7368, 7370, 7371, 9452, 9411, 9412, 9415,

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9416, 9425, 9426, 9430, 9431, 9454, 9455, 9460, 8470, 9471, 9473, 9475, 9476, 9477.

In addition, students are required to take 12 credit hours of the following shared 8000/9000-level graduate courses: Math 9787, Math 8090 Master's Project, Economics 9413, Economics 8085 Problems or Economics 8090 Research, Economics 8XXX (exclusive of other 8000-level elective courses already taken), and to complete an M.A. paper in economics (normally undertaken in Economics 8413) and a master's project in mathematics (Math 8090). Students are encouraged to undertake a single project that will satisfy both requirements. It is expected that the project will contain substantial work done in each field.

Dual Master's Degree in Applied Mathematics And Electrical Engineering

The Departments of Mathematics and Electrical and Computer Engineering offer selected students the option of obtaining a dual M.S. degree in applied mathematics and an M.S. degree in Electrical Engineering within an integrated program. Students enrolled in the dual master's degree program may obtain degrees based on 48 credit hours of course work. In each degree field a minimum of 18 hours of graduate course work is required.

The following two courses from the Department of Mathematics are required: Math 8420 and 8440. In addition, four of the following elective courses are required: Math 7940, 7300, 7310, 7500, 7700, 7900, 7560, 7320, 7520, 7140, 8445, 8425, 8470, 8441, 8648, 8703.

The students are required to take the following courses from the Department of Electrical and Computer Engineering: 18 credit hours of courses numbered 7XXX or 8XXX exclusive of ECE 4990, ECE 4970, ECE 4980, ECE 8085, and ECE 8990. None of the Math courses taken in the MS-Math degree can be included in this group of courses. Courses must be taken in at least two of the areas of specialization of the ECE graduate curriculum. At least nine hours of credit must be taken in the ECE department. At least one of these courses must be at the 8000-level. The courses must form a cohesive program of study chosen with the approval of an advisor.

In addition, students are required to take the following shared

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8000-level graduate courses: Math 8XXX Elective, Math 8090 Master's Project, ECE 8XXX Elective, ECE 8990 Research. Students are required to undertake a single master's project that will satisfy the requirements for Math 8090 and ECE 8990.

Courses

See the Mathematics Department descriptions of advanced courses: http://www.math.missouri.edu/degrees/graduate/gradcourses/index.html

See also Mathematics (MATH) graduate courses on myZou. Guest Access: http://myzou.missouri.edu/

END OF PROGRAM DESCRIPTION

Mechanical & Aerospace Engineering Graduate Programs

Contact Information

College of Engineering
E2413 Lafferre Hall
573-882-2085
http://engineering.missouri.edu/mae/

About Mechanical & Aerospace Engineering

Like markets merging together to create a global economy, this decade has approached the exciting frontier of joint research. The marriage of Mechanical Engineering to related fields has contributed to a new "Interdisciplinary Era". In meeting the challenges brought on by this co-operative approach to engineering, the Department of Mechanical & Aerospace Engineering (MAE) at the University of Missouri has broadened its scope in both education and research while maintaining strengths in the fundamental disciplines: Dynamics & Control, Design & Manufacturing, Materials & Solids and Thermal & Fluid Science Engineering. Such well-established academic traditions in the undergraduate and graduate curriculum as well as nationally renowned research programs are the basis for MAE having become the largest department in the College of Engineering at MU. An equally important aspect contributing to the quality of the MAE department is the aggressive pursuit of funding, by our faculty, to establish nationally recognized research programs. Well-earned support through sizable funding from both federal agencies and industry are valuable resources in the promotion of our graduate research and undergraduate teaching.

Career Opportunities

Graduate programs are planned to prepare students for advanced professional engineering careers. In recognition of the broad nature of the field of mechanical and aerospace engineering, considerable latitude in programs is encouraged so students may prepare for employment in industry, education and government. The usual purpose of a PhD program is to prepare a person for a career in research or teaching. The program is oriented toward research culminating in a dissertation suitable for publication.

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Areas of Study

A student may pursue an area of concentration selected from AI/expert systems, automation, bioengineering, combustion, control, creep and plasticity, design optimization, numerical methods, computational fluid dynamics, fracture mechanics, heat transfer, interactive computer graphics, laser diagnostics, manufacturing systems, materials science, mechanical syntheses, mechatronics, mechanics, parallel computation, residual stress, robotics, thermal systems design and management and ultrasonic nondestructive evaluation.

Licensure

Information on degree requirements for engineering licensure is detailed under Professional Engineering Registration.

Facilities and Equipment

The department has several specialized laboratories in aerosol mechanics, combustion, computer control, creep and fracture mechanics, fluid mechanics and heat transfer, manufacturing, materials science and structural dynamics.

Besides the modern instrumentation and equipment normally found in well-equipped mechanical and aerospace engineering laboratories, the department has, or has access to, such specialty items as MTS and Instron material and structural test equipment, wind tunnels, X-ray and a scanning electron microscope facility, computer control systems, a scanning laser vibrometer, a microscale heat transfer and electronic coding laboratory, an experimental stress laboratory, a fluid power laboratory and the university research reactor.

Information Technology and Computing

A combination of the campus Division of Information Technology and the Engineering Technical Services (ETS) provided advanced engineering computation for College of Engineering faculty and students. CAD/CAM and graphics are the primary emphasis, although artificial intelligence, multiple high-level programming languages and computational and simulation libraries also are available.

The College of Engineering operates one high performance enterprise server, two super minicomputers and 17 HP workstations. The ETS also provides hardware/software support, locally, to nine College of

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Engineering departments and their affiliated research centers. These units are networked via Ethernet to the superminicomputers operated by the College of Engineering.

The Division of IT operates two remote terminal sites in the Engineering Buildings East. The University also supports an extensive computer system consisting of IBM mainframe computers, remote terminal sites, and PC and Macintosh labs throughout the campus.

Financial Aid from the Program
Admission decisions to the graduate program are made without considerations of a student's financial need. Once admitted, a student may be considered for fellowships, research assistantships (RAs) and teaching assistantships (TAs). Awarding of fellowships is initiated by the department. RAs are awarded by individual faculty members. A student may apply by contacting faculty members directly. Application forms for TAs are available in the department office. International students are not eligible for TAs in their first semester of study. For specific departmental requirements, please refer to the MAE Graduate Handbook. Please see the department website for information on how to contact the professors individually about research assistantships offered.

Mechanical and Aerospace Engineering Faculty

James E. Bryan
assistant professor, PhD, Texas A&M University. Two-phase heat transfer; microscale, MEMS, and macroscale applications with emphasis on electrohydrodynamic/electrostatic force enhancement/control and novel enhanced surface development. Microscale transport; fluid pumping, flow control, and convection enhancement applications with emphasis on electrohydrodynamic/electrostatic force enhancement/control. Thermal systems; design, enhancement, and control (performance and manufacturing process).

JK Chen
William and Nancy Thompson Professor, PhD, Purdue University. Ultrashort laser-material interaction, Nano-to micro-scale to continuum modeling, Thermomechanical damage, Computational mechanics, Composite materials and structures, Impact and penetration mechanics, Fracture mechanics.

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Uee Wan Cho
associate professor, PhD, Brown University. Solid and applied mechanics, materials science, structural and stress analysis, creep, plasticity, and continuum damage mechanics.

A. Sherif El-Gizawy
professor, PhD, University of Waterloo, Canada. Manufacturing design, process modeling, integrated computer aided manufacturing, and expert systems applications in manufacturing.

Roger Fales
assistant professor, PhD, Iowa State University. Controls, dynamics, off-highway machinery, and fl uid power.

Frank Z. Feng
professor, director of graduate studies, PhD, University of Minnesota. Dynamics and Control. Nonlinear dynamics in energy transfer and instabilities, vibration control and acoustics for noise suppression, damping characteristics of shape memory alloys, acoustic levitation of bubbles and drops, geometric methods and chaos in dynamical systems, microelectrical/mechanical systems (MEMS).

Sanjeev K. Khanna
associate professor, PhD, University of Rhode Island. Design of welded structures and welding engineering; experimental stress analysis; optical mechanics; residual stress measurement; dynamic and quasi-static fracture of monolithic and composite materials; materials characterization; integration of mechanics, design, and manufacturing into the undergraduate curriculum.

Craig A. Kluever
professor, PhD, Iowa State University. Guidance and control of aerospace vehicles, orbital mechanics, spacecraft and mission design, and trajectory optimization.

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Hao Li
assistant professor, PhD, Stevens Institute of Technology. Mechanical, electrical, and biomedical properties of nanostructured materials, i.e. cabon nanotubes, SiC nanowires, and hydroxyapatite nanofibers; template based nanofabrication; thin films and coatings; surface engineering; chemical vapor deposition; self assembly; ceramic micro/nano composites; bone cements, biomimetic nanocomposites, and scaffolds for tissue engineering.

Yuyi Lin
associate professor, PhD, University of California-Berkeley. Dynamics and control of mechanisms, flexible structures and robots, CAD/CAM.

Stephen J. Lombardo
associate professor, PhD, University of California-Berkeley. Binder removal by thermal methods, supercritical extraction of binder, synthesis and processing of ceramics for capacitor applications, high voltage capacitors, sintering of ceramics and high temperature reactions, strain mismatch in ceramic processing, particle dynamics in ceramic forming operations, and ceramic membranes.

Hongbin Ma
associate professor, PhD, Texas A&M University. Microscale heat transfer and flow process, micro heat pipes, semiconductor refrigeration, high heat flux cooling, thin film deposition, rapid cooling for high-power microelectronic devices, experimental heat transfer.

Steven P. Neal
associate professor, PhD, Iowa State University. Ultrasonic characterization of engineering and biomaterals, and solid mechanics. Email address: NealS@missouri.edu

P. Frank Pai
C. W. LaPierre Professor, PhD, Virginia Tech. Computational structural mechanics, composite and smart structures, structural health monitoring, nonlinear finite elements, deployable structures, modern nonlineardynamics, and large deformation processing.

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Douglas E. Smith
associate professor, PhD, University of Illinois at Urbana-Champaign. Development of finite element methods for simulation-based design, inverse analyses and computational biomechanics with a focus on design sensitivity analysis, multidisciplinary analysis and optimization, and reliability-based design. Applications include polymer and composites processing, heat treatment, structural optimization, bone remodeling and muscle simulation; and include theoretical development, computer implementation and industrial application.

Gary L. Solbrekken
assistant professor, director of undergraduate studies, PhD, University of Minnesota. Thermal design at all scales, development of thermal/fluid measurement systems, thermal management of electronic equipment, solid state energy conversion, and alternate energy generation strategies.

Robert Tzou
J. C. Dowell Professor, chair, PhD, Lehigh University. Microscale heat transfer, thermal lagging in ultrafast mircoelectronic/photonic devices, rapid thermal processing and modeling, anomalous diffusion in amorphous media, thermal control in rapid material processing, effective thermomechanical properties in composites, thermal and strain localization in high-speed penetration, thermomechanical interaction in fracture.

Richard T. Whelove
director of undergraduate studies, MEd, University of Missouri. Engineering graphics.

Robert A. Winholtz
associate professor, PhD, Northwestern University. Residual stresses, neutron and x-ray measurement of residual and applied stresses, composite and two phase materials.

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Qingsong Yu
associate professor, PhD, University of Missouri. Low-temperature plasma processing, plasma diagnosis, thin-film deposition, material surface modification and interface engineering, corrosion protection, polymer nanocomposites, plasma sterilization, bio- and biomedical materials, tissue engineering, electrochemical biosensors, and heat transfer nanofluids.

Yuwen Zhang
professor, PhD, University of Connecticut. Phase change heat transfer, transport phenomena in powder and/or gas based Solid Freeform Fabrication (SFF), heat and mass transfer analysis associated with heat pipe science and technology, microscale heat transfer.

Vitaly E. Gruzdev
research assistant professor, PhD, S.I. Vavilov State Optical Institute, Russia. Physics of condensed matter, physics of solids, laser interactions with solids, laser engineering and optics, laser methods of material processing, laser methods of remote measurements and control.

Nam-Jung Kim
research assistant professor, PhD, University of North Carolina. Synthesis of nanoporous films with lattice ordering through self-assembly, characterization of degraded lattice structures due to various thermal heating, silicon matrix-embedded nano clusters and quantum dots with high densities, diffusion measurement on multiconnected nano-pore channels, design and development of patterned nanosized reactors with different scales.

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Master of Science in Mechanical & Aerospace Engineering

Admission Contact Information:

Melanie Gerlach (gerlachm@missouri.edu)
E2413 Mechanical & Aerospace Engineering
Columbia, MO 65211
573-882-2085

Admission Criteria:

Fall deadline: May 31
Spring deadline: October 31
Summer deadline: April 30

- Minimum TOEFL score: 500 (paper); 61 (Internet)
- Minimum IELTS academic score: 5.5
- Minimum GPA: 3.0
- BS in same or a closely related field

Lower GPAs require special action and substantiation, such as good test scores on the GRE or other recognized examinations.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the MAE Program:

- Official Transcripts (all Universities and Colleges attended)
- TOEFL/IELTS scores
- 3 letters of recommendation
- GRE scores
- Statement of Objectives

Courses

See Mechanical and Aerospace Engineering (MAE) graduate courses in the myZou online system.

MS Plan of Study

A plan of study is developed by the student and the adviser, subject to approval. The minimum degree requirement is 30 hours with a minimum of 18 hours at the 8000 level. Included within the 30 hours

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must be a special project report or thesis. A special project consists of three to five hours of MAE 8085 (Problems). Alternatively, programs directed toward a thesis shall include three to eight hours of MAE 8990 (Research). A thesis or a report is approved by designated faculty committees and is deposited in the department libraries.

Passing the MS final committee fulfills the degree requirements.

Doctorate in Mechanical & Aerospace Engineering

Admission Contact Information:

Melanie Gerlach (gerlachm@missouri.edu)
E2413 Mechanical & Aerospace Engineering
Columbia, MO 65211
573-882-2085

Admission Criteria:

Fall deadline: May 31
Spring deadline: October 31
Summer deadline: April 30

- Minimum TOEFL score: 500 (paper); 61 (Internet)
- Minimum IELTS academic score: 5.5
- Minimum GPA: 3.0
- Strong record in the MS program

Doctoral degree program applicants are closely and individually reviewed.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the MAE Program:

- Official Transcripts (all Universities and Colleges attended)
- TOEFL/IELTS scores
- 3 letters of recommendation (preferably from MS advisor and 2 other letters)
- GRE scores
- Statement of Objectives

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Courses
See Mechanical and Aerospace Engineering (MAE) graduate courses in the myZou online system.

PhD Degree Requirements
A minimum of 72 semester hours are required including the credit hours taken during the MS program. Students who received the MS degree from other than MU may transfer a maximum of 30 hours from their MS course work.

A doctoral student must satisfy a special requirement, either proficiency in foreign languages or a collateral field. The collateral field requires a minimum of nine hours of course work in one area other than MAE.

PhD Plan of Study
The PhD candidate plans a plan of study and research under the immediate supervision of an adviser and in close cooperation with the doctoral program committee approved by the dean of the Graduate School upon the department's recommendation.

Qualifying Examination
A qualifying examination is given soon after the student begins doctoral study. Successful completion of this examination is a prerequisite to formal acceptance into the PhD program.

Students with an MS from MU or another accredited U.S. engineering program will be exempt from the qualifying examination if their MS GPA and total GRE scores satisfy a departmental exemption rule.

Comprehensive Examination & Dissertation
A comprehensive examination is given after all course work and language or collateral requirements have been satisfied. Upon completion of the plan of study and research a final examination, essentially a defense of the dissertation, is administered.

END OF PROGRAM DESCRIPTION

Medical Pharmacology & Physiology Graduate Programs

Contact Information

School of Medicine
MA415 Medical Sciences Building
573-882-4957
http://mpp.missouri.edu/

About Our Programs

The joining of these two disciplines provides a powerful way to address modern questions of biology. The department offers MS and PhD degree programs in Pharmacology and in Physiology. These programs are designed to prepare students for rewarding teaching and/or research careers in academia, government or the pharmaceutical and biotechnical industry.

Pharmacology

Pharmacology is a basic medical science that deals with actions of drugs, hormones and neurotransmitters on living processes. Knowledge based on the results of pharmacological research leads to increased effectiveness and safety in the treatment of diseases in man and animals. Pharmacology is different from pharmacy, which is a profession concerned with the preparation and dispensing of drugs.

Physiology

The discipline of Physiology focuses on understanding the integrative function of living organisms from the molecular to the organismal level. As such, physiological research addresses how genes, organelles, cells, tissues and organs are integrated to accomplish the complex functions of living organisms. From a medical prospective, understanding normal function is a prerequisite to understanding disease.

Areas of Study

Regardless of their final degree objectives, students admitted into the departmental graduate programs will participate in a core curriculum during the first year and choose a specific tract leading to either

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a degree in Pharmacology or in Physiology following successful completion of the first year. The department also offers specially designed curriculum for individuals interested in a combined MD/ graduate degree or who have previous relevant medical education.

Departmental Research

The departmental faculty has expertise in a variety of mammalian systems, with emphases in cardiovascular and endocrine physiology and molecular and cellular pharmacology. Individual labs utilize a number of different experimental models ranging from the whole animal studies to cellular, subcellular, biochemical and modern molecular approaches. Human research is also emphasized.

Research problems under current investigation include microvascular control of blood flow; modulation of vascular function by the extracellular matrix; role of the microcirculation in inflammation and diabetes; mechanisms involved in angiogenesis membrane regulation and ion transport; barriers separating circulating blood and tissue; energetics and metabolism of vascular smooth and cardiac muscle; electrophysiology of isolated cardiac vascular smooth muscle and endothelial cells; exercise physiology and regulation of contractile protein functions; and hormonal induction of genetic transcription, intracellular signaling mechanisms and genetic regulation of cell proliferation, cell cycle, cell differentiation and apoptosis; and the pathogenetic mechanisms of alcohol on liver cells.

Partnerships

Cooperative interactions exist with other clinical and basic science departments in the School of Medicine as well as with the Truman Veterans Hospital, the Dalton Cardiovascular Research Center, the College of Veterinary Medicine and various campus-wide programs in Molecular Biology and Food for the 21st Century.

The cooperative research atmosphere encourages staff and students to work across departmental lines and provides a unique opportunity for interdisciplinary training of the students.

Teaching Experience

In addition to course work and research training, all graduate students are required to participate as teaching assistants in laboratory or lecture

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instruction offered by the department. Such experience enhances the students' presentation and teaching skills, contributes to their professional maturity, and reinforces a sense of collegiality between students and faculty.

Medical Pharmacology and Physiology Faculty

Ronald Korthuis
chair and professor, PhD, Michigan State University.

Michael Davis
vice-chair, professor, PhD, University of Nebraska.

Michael Rovetto
director of graduate studies, professor, PhD, University of Virginia.

Edward Blaine
professor, PhD, University of Missouri.

Keith Byington
associate professor, PhD, University of South Dakota.

George Davis
professor, MD, PhD, University of California-San Diego.

William Durante
professor, PhD, University of Toronto.

Paul Fadel
assistant professor, PhD, University of North Texas Health Science Center.

Leonard Forte
professor, PhD, Vanderbilt University.

Stephen Halenda
associate professor, PhD, Medical College of Virginia.

Christopher Hardin
professor, PhD, University of Cincinnati.

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Michael Hill
professor, PhD, University of Melbourne.

Lene Holland
professor, PhD, University of California-San Francisco.

Thomas Hurley
professor, PhD, Duke University.

Virginia Huxley
professor, PhD, University of Virginia.

Tzyh-Chang Hwang
professor, MD, National Yang-Ming Medical College, Taiwan, PhD, Johns Hopkins University School of Medicine.

Marilyn James-Kracke
associate professor, PhD, University of British Columbia.

Maike Krenz
assistant professor, Ph.D., University of Muenster.

Robert Lim
associate professor, PhD, University of Washington-Seattle.

Luis Martinez-Lemus
assistant professor, PhD, Texas A&M University.

Kerry McDonald
associate professor, PhD, Marquette University, Milwaukee, Wisconsin.

Gerald Meininger
professor, PhD, University of Missouri.

Mark Milanick
professor, PhD, University of Chicago.

Luis Polo-Parada
assistant professor, PhD, Case Western Reserve University.

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Steven Segal
professor, PhD, University of Michigan.

Shivendra Shukla
professor, PhD, University of Liverpool.

Gregory Sowa
assistant professor, PhD, Polish Academy of Sciences, Institute of Pharmacology.

Peter Wilden
associate professor, PhD, University of Iowa.

Joint & Adjunct Faculty to Medical Pharmacology and Physiology

Christopher Baines
assistant professor, PhD, University of South Alabama.

Don Blount
professor emeritus, PhD, West Virginia University.

Frank Booth
professor, PhD, University of Iowa (Biomedical Sciences).

Doug Bowles
joint professor, PhD, University of Texas-Austin (Biomedical Sciences).

James Davis
professor emeritus, MD, Washington University-St. Louis, PhD, University of Missouri.

Kevin Dellsperger
professor, MD, PhD, Louisiana State University (Medicine).

Nancy Dietz
professor, PhD, University of South Dakota (VA Pharmacy).

Vincent Demarco
associate research professor, PhD, University of Florida (Child Health).

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William Fay
professor, MD, PhD, University of Illinois (Cardiology).

E. Lee Forker
professor emeritus, MD, University of Pittsburgh.

Ronald Freeman
professor emeritus, PhD, Indiana University.

Kevin Gillis
associate professor, PhD, Iowa State University (Biological Engineering).

Eileen Hasser
professor, PhD, University of Oklahoma Health Science Center (Biomedical Sciences).

Meredith Hay
vice president, PhD, University of Texas Health Sciences.

Jamal Ibdah
professor, MD, PhD, University of Jordan (Gastroenterology).

Allan Jones
professor emeritus, PhD, University of Pennsylvania.

Hyun Dju Kim
professor emeritus, PhD, Duke University.

M. Harold Laughlin
professor, PhD, University of Iowa.

John Lever
associate professor, PhD, North Carolina State University (Radiology).

Robert Russell
professor emeritus, PhD, University of Missouri.

James Sowers
professor, PhD, University of Missouri (Endocrinology).

continued on next page

Sharon Stack
professor, PhD, University of Louisville (Pathology).

Jeff Smith
assistant professor, PhD, University of Missouri (Radiology).

Ronald Terjung
professor, PhD, University of Iowa (Biomedical Sciences).

Mahesh Thakkar
assistant professor, PhD, University of Missouri (Neurology).

John Turner
professor emeritus, PhD, University of Missouri.

Albert Sun
professor emeritus, PhD, Oregon State University.

Ronald Walkenbach
professor emeritus, PhD, Missouri Lyons Institute.

Walter Wosilait
professor emeritus, PhD, Johns Hopkins University.

Marvin Zatzman
professor emeritus, PhD, The Ohio State University.

Cuihua Zhang
associate professor, PhD, Jin Zhou Medical College (Internal Medicine).

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Admission

Contact Information

Monica Elliott
MA415 Medical Sciences Bldg, DCO63.00;
Columbia, MO 65211
573-882-4957

Admission Criteria

- Fall deadline: January 10
- Spring deadline: October 10
- Minimum TOEFL score: 500/173 (paper/computer)
- Minimum GPA: 3.0 in the last 60 hours
- Bachelor's degree in chemistry, biology, pharmacy or related areas from an accredited college
- Background in biology and chemistry and an understanding of mathematics and physics
- Course work in biochemistry and physiology is highly recommended.
- Previous lab or research experience preferred

Students are usually admitted to begin their program in the Fall semester, but applications for admission in other semesters will be considered on a space-available basis. Women and minorities are encouraged to apply.

Students with an appropriate educational background are encouraged to apply for entrance into the PhD program. A master's degree is not a prerequisite for admission to the doctoral program. The department will consider applications for the MS degree programs, but PhD degree students will be given priority consideration for financial support. Deficiencies in course work may be remedied during the first years of the graduate program.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Medical Pharmacology & Physiology Program:

- Departmental application
- Personal statement
- Transcripts

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- 3 letters of recommendation (use form provided). The letters should be written by individuals knowledgeable of the student's academic capability.
- Official GRE & TOEFL scores

Financial Aid from the Program

Financial support in this program for qualified graduate students is available from several sources. Students also may be eligible for institutional teaching and research assistantships. In addition, there are a number of fellowship awards from the Graduate School and the campus-wide Life Science Program available on a competitive basis through nominations by the Department.

Deadlines for these fellowships are usually during the early part of the calendar year. Prospective candidate should therefore submit an application for admission to the department in the preceding fall. Finally, some of our students are supported by research grants of individual faculty members or by predoctoral fellowships from extramural sources.

Master of Science in Medical Pharmacology & Physiology

Degree Requirements

To satisfy requirements for the MS degree, a student must complete the professional plan of study with an average grade of B or better and pass an oral examination over an acceptable master's thesis. Candidates also must comply with other regulations governing master's degrees.

Length of Study

MS degree students should normally complete their studies and thesis project within three years of admission to the degree program.

Doctorate in Medical Pharmacology & Physiology

Plan of Study

The PhD plan of study includes at least two years of basic and advanced courses in physiology and/or pharmacology, as well as courses in cell and molecular biology. The students also will be trained in conducting physiological and pharmacological research in the laboratory of individual faculty members during the first year.

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Qualifying Examination Policy
The department does not require a formal qualifying examination. Successful completion of the core curriculum and satisfactory performance in conducting scientific research and teaching will qualify students for continuation in the PhD program.
Choosing a Track and Mentor
The student will choose a dissertation mentor at or before the end of the first year and decide whether they wish to pursue the doctoral program in Pharmacology or Physiology.

Comprehensive Examination
All PhD program students must pass a comprehensive examination before the end of the first semester of the third year of enrollment. The usual format of the comprehensive exam includes the writing and oral defense of a research proposal outside of the student's dissertation research area.

Dissertation
Each student must then carry out a dissertation research project, original in nature, which is expected to contribute significant new knowledge to the area of study. To facilitate this process, each student submits a dissertation research proposal within six months of passing the comprehensive examination.

Oral Defense
Finally, all PhD candidates must pass an oral defense of the dissertation and comply with all university and departmental regulations governing the PhD degree.

Length of Study
The doctoral program normally requires four to five years beyond the baccalaureate degree.

Courses

See Medical Pharmacology and Physiology (MPP) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Mizzou Online: MU Graduate Degrees, Certificates, and Courses Online

Mizzou Online Contacts:

MU Direct
103 Whitten Hall
Columbia, MO 65211
Phone: 1-800-545-2604 (toll-free), (573) 882-3598
Fax: (573) 882-5071
E-mail: MUdirect@missouri.edu

Center for Distance and Independent Study
136 Clark Hall
Columbia, MO 65211-4200
Phone: 1-800-609-3727 (toll-free), (573) 882-2491
Fax: (573) 882-6808
E-mail: cdis@missouri.edu

About Mizzou Online

For many students, moving to Columbia is not an option: family, career, and community obligations take precedence over full time, on-campus study. Other students, including those living in rural areas, other countries, persons with disabilities, or parents of small children, may simply prefer to learn from home. Fortunately, the University of Missouri offers several options for off-campus study—from independent study, to professional continuing education, to graduate degrees.

Under the auspices of University of Missouri Extension, Mizzou Online is a one-stop source for off campus learning. Graduate students now have greater learning flexibility — at times and places to fit any schedule.

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Mizzou Online serves as the gateway for:

- The Center for Distance and Independent Study, which offers flexible, self-paced courses that are independent of academic semesters; many courses are online; credit and non-credit courses available.

- MU Direct which offers interactive semester-based courses online (over the Internet) which can lead to graduate degrees and certificates.

MU Direct courses follow a semester schedule, with students receiving course materials, syllabi and lecture notes electronically. Depending on the course, online learning may be enhanced by a combination of content delivery methods that may include software applications, videoconference, BlackBoardtm, library electronic-reserves, and independent research. Most programs are completely online, while others require periodic campus visits.

Striving to meet the needs of working adults and other online learners, MU Direct also offers online registration and grade reports, toll-free numbers for student services and technical help, and e-mail support available during evening and weekend hours. Special arrangements with the MU Libraries and University Bookstore give students easy online or toll-free access to books and other necessary resources.

Mizzou Online courses (MU Direct and the Center for Independent Study) have an easy-to-follow format, yet offer the same intellectual challenge as face-to-face classrooms. Some students who prefer online study report more thoughtful interaction with their fellow students and instructors, as people have more time to reflect on their online class contributions. Online exchanges also help participating students to develop an extensive network of professional peers across the globe.

A number of academic programs permit students to take one or more Mizzou Online courses before applying to a degree program. However, academic admission requirements vary by school or college, so students should verify degree program requirements. Also, beyond Mizzou Online, some academic programs offer face-to-face classes in locations other than Columbia, for select online and residential degree programs.

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Mizzou Online Degrees

Agricultural, Food & Natural Resources

Food Safety and Defense (Graduate Certificate)

Architectural Studies

Human Environmental Science with emphasis in Architecture Studies (MS, PhD)

Education

Autism (M Ed)
Business and Marketing Education focus (M Ed)
Early Childhood Education focus (M Ed)
Early Childhood Special Education focus (M Ed)
Educational Leadership (partially online) (M Ed, Missouri Certification Preparation)
Technology in Schools (M Ed, EdSp)
Learning Systems Design & Development (M Ed, EdSp)
Library Media Specialist (partially online, Certification Preparation)
Gifted Education (M Ed, Missouri Certification Preparation)
Journalism Education (M Ed, Missouri Certification Preparation)
Literacy (M Ed)
Mental Health Practices in Schools (M Ed, EdSp)
Social Studies Education (M Ed)
Teaching English to Speakers of Other Languages (TESOL) (M Ed, Missouri Certification Preparation)

Library Science (partially online, MA)

Financial Planning

Personal Financial Planning (MS, post-baccalaureate certificate, CFP preparation)

Graduate School

Public Health (Graduate Certificate)
Graduate Certificate in Grantsmanship

Human Development and Family Studies (MA)

Gerontology (MA, Graduate Certificate)
Youth Development (MA, Graduate Certificate)

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Journalism

Journalism - Media Management (MA)
Journalism - Strategic Communication (MA)

Medicine

Health Management and Informatics
Executive Program in Health Services Management (MHA)
Executive Program in Health Informatics, Master of Science - Health Informatics (MS)
Graduate Certificate in Health Informatics
Graduate Certificate in Health Ethics

Nursing

Adult Mental Health Nurse Practitioner (MS)
Clinical Nurse Specialist (MS, specialist option)
Family Mental Health Nurse Practitioner (MS)
Family Nurse Practitioner (MS)
Leadership in Nursing and Health-Care Systems (MS)
Nursing Educator (MS)
Pediatric Nurse Practitioner (MS)
Public Health or School Health Nursing (MS)
Adult Health Clinical Nurse Specialist (Postmasters Certificate)
Child/Adolescent Psychiatric & MH Clin Nurse Spec (Postmasters Certificate)
Family Mental Health Nurse Practitioner (Postmasters Certificate)
Pediatric Nurse Practitioner (Postmasters Certificate)
Psychiatric/Mental Health Clinical Nurse Specialist (Postmasters Certificate)
Pediatric Clinical Nurse Specialist (Postmasters Certificate)
Family Nurse Practitioner (Postmasters Certificate)
Mental Health Nurse Practitioner (Postmasters Certificate)
Doctorate in Nursing (DNP)
Nursing (PhD)

Social Work

Master of Social Work (MSW)

END OF DESCRIPTION

Molecular Microbiology & Immunology Graduate Programs

Contact Information

School of Medicine
M616 Medical Sciences Building
573-882-8152
http://mmi.missouri.edu/about/

About Molecular Microbiology & Immunology

The Department is built around scholarly activities with three important missions: cutting-edge research programs to address relevant biomedical problems in microbiology and immunology, a graduate training program to educate strong, independent research scientists, and a commitment to provide knowledge-based service to the state, national and international communities that will improve global understanding of the microbial world, infectious diseases and host immunity to infection. Graduate (and postgraduate) education programs offer the basic principles of microbiology and immunology as well as research training opportunities in the laboratories of established scientists with diverse research interests.

Degrees Offered

The department of Molecular Microbiology & Immunology (MMI), in partnership with the faculty from the department of Veterinary Pathobiology (VPB), offers a comprehensive graduate program leading to the Doctor of Philosophy (Ph.D.) degree. This program provides individualized training that is strongly oriented toward basic research in molecular and cellular biology, immunology and host-parasite interactions. MMI offers:

- PhD in Microbiology & Immunology (Medicine)
- Cooperative Degrees: MD and PhD in Microbiology & Immunology (Medicine)
- Interdisciplinary Area Program: PhD in Genetics Area Program

Faculty Research

The program is equipped to support a wide range of research activities at the cutting edge of our diverse science. Faculty research activities

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focus on key problems in pathogenic microbiology, immunology, molecular biology, genetics and virology.

Research Facilities and Resources
The research environment at MU with Colleges of Medicine, Veterinary Medicine, Agriculture, Engineering, and Arts and Sciences on one comprehensive campus fosters the development of interdisciplinary scientific interactions that enhance both research and training opportunities for faculty and students alike. The Bond Life Sciences Center represents such an interdisciplinary research enterprise and houses investigators from multiple colleges and departments, including MMI. Critical to the Department's interests in infectious diseases and immunity research, the recent construction of an NIH-funded Regional Bio-containment Laboratory provides modern BSL3/ABSL3 containment research space and animal holding facilities for the investigation of highly infectious organisms and human select agents. This resource, and the Department's partnership with the Midwest Regional Center for Excellence in Biodefense and Emerging Infectious Disease Research, centered at Washington University in St. Louis, position MU in the national network of infectious disease research and training efforts. Please visit the MMI Web site for additional information on MMI's access to state of the art facilities.

Career Opportunities
Graduates completing this training are prepared to pursue challenging and rewarding professional careers that involve research and teaching at supervisory levels in both the academic and private sectors.

Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Molecular Microbiology and Immunology Faculty

Mark M. McIntosh
chair, professor, PhD, University of Texas. Iron-mediated regulation of gene expression; bacterial membrane transport processes using energy-driven receptors; molecular biology of mycoplasmas.

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Michael R. Baldwin
assistant professor, PhD, University of London, UK. Understanding the molecular basis of bacterial pathogenesis with an emphasis on characterizing the role of bacterial toxins in the disease process.

Karen L. Bennett
professor, PhD, Roswell Park Memorial Institute, State University of New York - Buffalo. Germline differentiation in C. elegans.

Donald Burke
associate professor, PhD, University of California Berkeley. Understanding the mechanism and evolution of catalysis by ribozymes and the molecular basis of retroviral inhibition by RNA-based drugs.

John F. Cannon
associate professor, PhD, University of Wisconsin-Madison. Genetics of Saccharomyces cerevisiae; Role of protein phosphatase in all cell cycle regulation; Molecular genetic analysis of RAS function.

Mark A. Daniels
assistant professor, Ph.D., University of Minnesota. T cell development and activation.

Dongsheng Duan
Margaret Proctor Mulligan Professor in Medical Research, PhD, University of Pennsylvania. Transduction biology of recombinant adeno-associated virus (rAAV) and development of rAAV for muscle gene therapy.

Richard A. Finkelstein
professor emeritus, PhD, University of Texas.

Marc Johnson
assistant professor, PhD, Oregon State University. Molecular characterization of HIV assembly and budding.

David R. Lee
director of graduate studies, associate professor, PhD, University of Virginia. Antigen presentation; activation and differentiation of human T lymphocytes.

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Shan-Lu Liu
associate professor, PhD, University of Washington, Seattle, WA. Retroviral pathogenesis and entry; HCV entry pathways and pathogenesis; molecular biology of XMRV and relationships to human diseases; HIV lentiviral vectors in gene therapy.

Michael L. Misfeldt
professor and associate dean for faculty affairs, PhD, University of Iowa. Regulation, expression and function of Toll-like receptors.

David J. Pintel
Dr. R. Philip and Diane Acuff Professor in Medical Research, PhD, University of Illinois-Chicago. Analysis of eukaryotic gene expression using parvovirus model systems.

Stefanos Sarafianos
assistant professor, PhD, Georgetown University. Molecular mechanisms of drug resistance and inhibition of HIV, SARS, and other viral and bacterial pathogens.

Emma Teixeiro-Pernas
assistant professor, PhD, Universidad Complutense, Madrid, Spain. Regulation of T cell immune responses against infections and tumors.

Louise S. Thai
teaching associate professor, MD, Sechenov Medical School, former USSR.

Kim S. Wise
professor emeritus, PhD, University of Southern California. Pathogenic role of mycoplasmas.

Habib Zaghouani
J. Lavenia Edwards Chair in Pediatrics; director, Center for Cellular and Molecular Immunology; professor, PhD, University of Paris, France. T cell tolerance and autoimmunity.

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Veterinary Pathobiology Faculty

George Stewart
chair, McKee Professor of Microbial Pathogenesis, PhD, University of Texas Health Sciences Center. Regulation of virulence gene expression; global regulation of enterotoxin gene expression in Staphylococcus aureus; expression of sporulation-specific proteins in Bacillus; characterization of the leukotoxin of Fusobacterium necrophorum.

Deborah Anderson
assistant professor, PhD, University of California, Los Angeles. Pathogenesis and host response during Yersinia pestis infections.

Brenda T. Beerntsen
associate professor, PhD, University of Wisconsin. Mosquito-parasite interactions.

Cynthia L. Besch-Williford
associate professor, DVM, Louisiana State University, PhD, University of Missouri. Cellular tropisms of viral pathogens, development of improved methods of disease diagnosis, and characterization of spontaneous and induced animal models of disease.

Charles R. Brown
associate professor, PhD., University of Chicago. Host response to infectious disease.

Michael J. Calcutt
associate professor, PhD, Leicester University, UK. Molecular biology of mycoplasmas.

John K. Critser
Gilbreath – McLorn Professor of Comparative Medicine, PhD, University of Wisconsin. Comparative medicine, cryobiology and reproductive biology.

Craig L. Franklin
associate professor, DVM, PhD, University of Missouri. Pathogenesis of chronic intestinal mucosal inflammation.

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Daniel E. Hassett
assistant professor, PhD, University of Florida. Modulation of immune responses to infectious diseases and vaccines during pregnancy and early in life, cell mediated immunity and immunology of reproduction.

Christian L. Lorson
associate professor, PhD, University of Missouri. Molecular basis of spinal muscular atrophy; RNA processing; gene therapy.

Bimal K. Ray
professor, PhD, Calcutta University. Molecular mechanisms associated with inflammation-induced diseases that include atherosclerosis, amyloidosis, rheumatoid and osteoarthritis.

Thomas J. Reilly
clinical assistant professor, PhD, University of Illinois. Biochemical characterization of Host/Microbe Interaction; development of PCR diagnostic probes for diseases of bacterial etiology; vaccine development.

Lela Riley
professor, PhD, University of Kansas. Pathogenesis of bacterial and viral infectious agents and development of novel molecular diagnostics.

Roger W. Stich
associate professor, PhD, Oklahoma State University. Biology of tick-pathogen-vertebrate interactions.

Guoquan Zhang
assistant professor, DVM, Inner Mongolia Agricultural University, PhD, University of Gifu. The role of dendritic cells in presenting C. burnetii antigen and regulating T cell-mediated immunity against C. burnetii infection.

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Also jointly appointed to Molecular Microbiology and Immunology

Joint Faculty

Ulus Atasoy
assistant professor, MD, University of Minnesota. Mechanisms of post-transcriptional regulation. (Surgery)

Helen Braley-Mullen
professor, PhD, Purdue University. Regulation of immune response, autoimmune disease, cellular immunology. (Internal Medicine)

Susan C. McKarns
assistant professor, PhD, Michigan State University, East Lansing, MI. TGF- signaling in maintaining peripheral tolerance and regulating immune responses. (Surgery)

Bumsuk Hahm
assistant professor, PhD, Pohang University of Science and Technology, Pohang, Korea. Interplay between viruses and host immunity. (Surgery)

Judy D. Wall
professor, PhD, Duke University. Genetics of uranium reduction by sulfate-reducing bacteria. (Biochemistry)

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Application and Admission Information

MMI Admission Contact Information

Jana Clark
573-882-3938
mmi@missouri.edu

Admission Criteria

- Fall deadline: January 15
- Minimum TOEFL score: 580/237/92 (paper/computer/internet)
- Minimum GRE score: V+Q=1100
- Minimum GPA: 3.0
- Bachelor's degree from an accredited college or university
- Courses in the following: biology; advanced courses in biochemistry and/or molecular biology are highly desirable; chemistry (quantitative or organic); physics; mathematics

The PhD degree is offered only to students who demonstrate a high level of specialized knowledge and clear evidence of research potential.

Required Application Materials

To the Graduate School:

- All required Graduate School documents
- TOEFL score (if international applicant)

To the MMI Program:

- Departmental application
- 3 letters of recommendation from individuals competent to comment on the applicant's potential for graduate work
- GRE scores
- Personal statement
- Copy of TOEFL scores (if international applicant)

About the Doctorate

The Departments of Microbiology and Immunology and Veterinary Pathobiology offers individualized graduate programs designed to prepare each student for an advanced professional career in microbiology and immunology. Emphasis is placed on developing outstanding students for productive supervisory roles in universities and colleges, industry, government and research institutes. Enrollment is limited to those students who show evidence of potential for research.

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Research & Teaching Assistantships
Students in the doctoral program are awarded research assistantships. Research assistants work with faculty members to obtain practical experience in carrying out research proposals through the collection of research data and writing research reports. All students in the graduate program are required to participate as teaching assistants during their graduate studies.

Degree Requirements
To be accepted for candidacy into the PhD program in microbiology & immunology, all applicants must perform satisfactorily in a core curriculum that includes advanced-level courses in the sub disciplines of immunology, molecular biology and microbial pathogenesis. Under the guidance of a doctoral program committee, a course of study is individually designed to fit each student's academic background, experience and objectives. Interdisciplinary courses in biochemistry, molecular and cellular biology and genetics provide breadth and balance in the program and enhance the student's research abilities. In addition, the PhD program consists of the following:

- Practical experience in teaching
- Successful completion of a comprehensive examination that tests the student's ability to develop an original scientific hypothesis and devise a feasible research plan that will test the hypothesis.
- A demonstration of research and writing ability by completing a scholarly dissertation on an approved research problem that results in the contribution of significant new knowledge. The final examination primarily covers this dissertation research.

Courses

See Microbiology (MICROB) graduate courses in the MyZou online system.

END OF PROGRAM DESCRIPTION

Music Graduate Programs

Contact Information

School of Music
140 Fine Arts Center
573-882-2604
http://music.missouri.edu/

About the School of Music

Founded in 1907, the School of Music is one of the larger academic units in the College of Arts and Science. Although it is comprised of 34 full-time faculty members and has 230 music majors, it is small enough to permit close, personal interaction between students and faculty, but large enough to provide many wonderful opportunities for talented students to excel. Our primary mission is to prepare students to become professional musicians and music educators. The School of Music is widely known for its scholarship in the field, and it is an important cultural resource for the profession, the campus community, and the people of Missouri.

Degrees Offered

- MM
- MA in Music History
- MA, M Ed, EdSp, EdD and PhD in Curriculum and Instruction with an emphasis area in Music Education

Offered by School of Music:
Master of Music (MM) in performance, theory, composition, piano pedagogy, collaborative piano, or conducting; and a Master of Arts (MA) degree in music history.

Offered by College of Education:
Degrees with a major in music education are offered by the Department of Learning, Teaching, and Instruction in the College of Education in conjunction with the School of Music. These degrees include the Master of Arts (MA), Master of Education (M Ed), Educational Specialist (EdSp), Doctor of Education (EdD) and Doctor of Philosophy (PhD) in education, with an emphasis area in music education.

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Performance
At MU a student of music has the opportunity to hear many concerts or to participate in a variety of performing organizations. Many recitals are given by students, faculty and visiting artists. Among the student ensembles that give several concerts during the year are the University Philharmonic, Symphonic Wind Ensemble and other concert bands, instrumental jazz ensembles, University Singers and other choral ensembles, Show-Me Opera, and chamber music groups. Faculty ensembles that present recitals regularly include the Esterhazy Quartet, the Missouri Woodwind Quintet and the Missouri Brass Quintet.

Resources and Facilities
The music section of the Fine Arts Building contains a recital hall, classrooms, studios and practice facilities-all air-conditioned and suitably equipped. The music holdings in Ellis Library, both printed and recorded materials, constitute a substantial research and reference collection. The School of Music maintains a digital piano and MIDI laboratory, analog and digital music studios, and access to a listening laboratory for history and theory courses.

Music Faculty

Robert Shay
director, professor, PhD, University of North Carolina at Chapel Hill.

Wendy Sims
director of music education, professor, PhD, Florida State University. Music education/elementary-general.

Dan Willett
associate director, associate professor, MM, Michigan State University. Oboe.

Michael Budds
professor, PhD, University of Iowa. Music history.

Paul Crabb
professor, PhD, Florida State University. Choirs/conducting.

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W. Thomas McKenney
professor, PhD, Eastman School of Music, University of Rochester. Composition/theory.

Leslie Perna
professor, MM, Boston University. Viola.

Melvin Platt
professor, PhD, University of Michigan. Music education.

Marcia Spence
professor, DMA, University of North Texas. French horn.

Jo Ella Todd
professor, MM, New England Conservatory. Voice.

Eva Szekely
professor, MS, The Juilliard School of Music. Violin.

Janice Wenger
professor, DMA, University of Missouri-Kansas City. Piano/accompanying.

Iskander Akhmadullin
associate professor, DMA, University of North Texas. Trumpet.

Edward Dolbashian
associate professor, MMA, Yale University. Orchestra/conducting.

Darry Dolezal
associate professor, MM, Peabody Institute. Cello.

Stephan Freund
associate professor, DMA, Eastman School of Music. Composition/music theory.

Julia Gaines
associate professor, DMA, University of Oklahoma. Percussion.

Paul Garritson

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associate professor, MM, Yale University. Clarinet.

Steven Geibel
associate professor, MM, University of Missouri. Flute.

Ann Harrell
associate professor, MM, The University of Texas. Voice.

Neil Minturn
associate professor, PhD, Yale University. Theory.

Peter Miyamoto
associate professor, DMA, Michigan State University. Piano.

Thomas O'Neal
associate professor, DMA, University of Arizona. Bands/conducting.

Rodney Ackmann
assistant professor, MM, Indiana University. Bassoon.

Susan Jensen
assistant professor, MM, University of Southern California. Violin.

Angelo Manzo
assistant professor, DMA, The University of Texas. Tuba/euphonium.

Judith Mabary
assistant professor, PhD, Washington University. Music history.

Leo Saguiguit
assistant professor, MM, Northwester University. Saxophone.

Brian Silvey
assistant professor, PhD, The University of Texas. Music education.

Arthur White
assistant professor, DMA, University of North Carolina at Greensboro. Jazz studies.

Christine Seitz

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assistant teaching professor, MM, University of Wisconsin. Voice/opera.

Drew Leslie
visiting assistant professor, DMA, The University of Texas. Trombone.

Dan Urton
adjunct associate professor, MM, New England Conservatory. Voice.

Natalia Bolshakova
adjunct assistant professor, MM, University of North Texas. Piano.

Erica Manzo
adjunct assistant professor, DMA, The University of Texas. Music theory/clarinet.

Paul Seitz
adjunct assistant professor, DMA, University of Wisconsin. Music theory.

Sue Stubbs
adjunct assistant professor, MM, University of Missouri. Double bass.

Anthony Glise
adjunct faculty, MM, New England Conservatory. Classical guitar.

Application and Admission Information

General Application Information

Detailed information may be found at http://music.missouri.edu/graduate/graduate.html.

Prospective students (MM and MA-Music History) may contact the associate director (e-mail) to request information about the prerequisites and graduation requirements for specific academic areas, and assistantships or other financial aid. Prospective students in music education (MA, M Ed, EdSp, EdD and PhD) should contact the director of music education (e-mail).

Examinations and Other General Requirements for Admission

All entering MM and MA-Music History students are required to take

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two-hour diagnostic advisory examinations in music history and theory. In addition, performance majors are auditioned by the faculty in their applied area. The results of this entire procedure are used as a basis for advisement and development of each student's graduate plan of study.

Music Comprehensive Examination Requirements
Near completion of course work for the degree, all candidates for the MM or MA-Music History degree must successfully complete a written comprehensive examination. The School of Music Student Handbook and the School of Music Web site contain detailed course requirements for the various programs.

Courses

See various sections of Music in the myZou online system.

MUSIC_NM - Music-Courses for Non-Majors
MUS_APMS - Music-Applied Music
MUS_ENS - Music-Ensemble Courses
MUS_GENL - Music-General
MUS_H_LI - Music-Music History And Litera
MUS_I_VR - Music-Instrumental And Vocal R
MUS_I_VT - Music-Instrumental And Vocal T
MUS_THRY - Music-Music Theory

END OF PROGRAM DESCRIPTION

Natural Resources Master's Degree Program

School of Natural Resources
103 Anheuser-Busch Natural Resources Building
Columbia, Missouri 65211
573-882-7045
http://www.snr.missouri.edu/academics/graduate.php

About the Natural Resources Master's Degree Program

This is a 30-credit, non-thesis graduate program developed for the continuing education of early- to mid-career professionals who want to acquire expertise in the latest developments in the natural resources and related disciplines.

A new management-focused program will provide cutting-edge knowledge in a variety of natural resource disciplines, enhancing administrative policy and legal knowledge, and provide opportunities to integrate these concepts and skills in an applied, multidisciplinary framework.

Each student will undertake a technical project (for 6 credits) specific to the student's area of concentration that integrates graduate education with natural resources management or practice. Students will have traditional advisers and committees just as in the traditional M.S. or Ph.D. programs. There is no formalized set of courses for the degree since each student will have unique intentions and needs.

Applications (see instructions below) will be reviewed by the MNR Admissions Committee. Potential major professor/advisers must agree to work with a student before formal admittance into the program. For information about the program prospective students should contact Dr. Bruce Cutter, Associate Director, School of Natural Resources at CutterB@missouri.edu.

Instructions for Applying

Before you can begin graduate study, you must be admitted by both the

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School of Natural Resources (SNR) and the MU Graduate School. Follow the application procedures described below.

Form A (PDF): Complete Form A and return it to the following address:
Master's in Natural Resources Program
The School of Natural Resources
103 Anheuser-Busch Natural Resources Building
University of Missouri
Columbia, MO 65211

Be sure to indicate your intended emphasis area and the name(s) of your proposed adviser(s).

Educational Objectives: Provide a one-two page (typed, double-spaced) statement of your educational objectives and why you wish to enroll in our program. This statement is vital. This should be submitted with Form A.

Transcripts: Submit copies of your college or university transcripts with Form A and your educational objectives statement. These can be photocopies for our purposes.

Letters of Support: Have at least three (3) letters of support from people who are familiar with your ability and academic performance sent to the above address. Form B (PDF) should be used for this purpose. Please complete a separate Form B for each person who willing providing a reference.

Tentative Acceptance into the Master's in Natural Resources Master's Degree Program
When all of the above materials have been received, the MNR committee will review them. You will then be notified of your status.

Final Acceptance by MU
You must also be accepted by the MU Graduate School.

MNR Plan of Study
Students accepted into the MNR degree program will meet with a faculty adviser to develop an individualized plan of study. This plan will meet both the MU Graduate School and SNR graduation requirements.

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Working with the adviser, the student will select a broad scope of courses from the 7000-9000 series of natural resources courses (below) and other courses in the School of Natural Resources (e.g., forestry, environmental sciences, parks, recreation, & tourism, fisheries and wildlife). For information about the plan of study, prospective students should contact Dr. Bruce Cutter, Associate Director, School of Natural Resources at CutterB@missouri.edu.

Courses

See Natural Resources (NAT R) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Neuroscience Interdisciplinary Graduate Programs

Contact Information

218 Tucker Hall
573-882-1847

Admission Contact Information

Nila Emerich emerichn@missouri.edu
218 Tucker Hall; Columbia, MO 65211
573-882-1847
http://www.neurosci.missouri.edu/program.html

About the Neuroscience Interdisciplinary Graduate Program

One of the most exciting and dynamic fields of modern science worldwide is Neuroscience, the study of how the nervous system is organized and how it functions. The field of Neuroscience encompasses many disciplines, including biology, biochemistry, computer sciences, electrical engineering (neural modeling of neural networks and biomedical instrumentation), neurology, neurosurgery, pharmacology, physics, physiology, psychology, psychiatry, and radiology.

Neuroscientists have advanced our understanding of nervous system development, neural function, injuries of the nervous system, and disease processes. At MU, neuroscientists investigate the molecular and cellular organization of the nervous system, the structure and function of neural systems (including vision and hearing), behaviors generated by the nervous system, and neurological diseases and disorders.

Students interested in the program are encouraged to contact members of the faculty directly by phone or e-mail, or visit the Interdisciplinary Neuroscience Program Web site.

Career Opportunities

MU's Interdisciplinary Neuroscience Program offers talented graduate students a chance to train for a career in one of the most exciting fields

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of modern science. Most of our students pursue research and teaching careers in basic neuroscience departments at prestigious research universities. Others opt for challenging and rewarding positions in applied fields, such as drug research or neurodiagnostic technology. Whatever their ultimate goals, the graduate neuroscientists who are trained at MU gain a solid understanding of the nervous system and of the experimental methods by which this knowledge is acquired.

Plan of Study
Typical undergraduate majors that constitute preparation for graduate work in neuroscience include, but are not limited to, biochemistry, engineering, biology, computer science, chemistry, physics, neurobiology, physics and psychology.

After completing comprehensive course work in molecular, cellular, systems and behavioral neuroscience, graduate students join a research laboratory and work with other lab personnel to master the relevant technical skills and theoretical concepts in their chosen field. Students in the Interdisciplinary Neuroscience Program have the opportunity to present their findings at lab meetings, seminars, journal club sessions, and both national and international professional scientific conferences.

Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Interdisciplinary Neuroscience Program Faculty

Kristina Aldridge
assistant professor of pathology and anatomy, PhD, Johns Hopkins University. Normal age- and sex-related differences in brain morphology within species, including humans and non-human primates.

Douglas Anthony
professor of pathology and anatomy, MD, PhD, Duke University. Neuropathology: mechanisms involved in the accumulation of intermediate filaments within axons, and pathobiology of cancer, especially brain tumors.

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Bruce Bartholow
associate professor of psychological sciences, PhD, University of Missouri. Neural correlates of cognitive processes that underlie social behaviors, and impairment of these processes by alcohol consumption.

David Beversdorf
associate professor of radiology, neurology, and psychological sciences, MD, Indiana University. Autism, drug abuse, dementia, cognitive effects of stress, the cognitive neuroscience of problem solving ability, functional neuroimaging, and pharmacological modulation of cognition.

Anand Chandrasekhar
associate professor of biological sciences, PhD, University of Iowa. Molecular and cellular analysis of motor neuron specification and migration in the vertebrate embryo.

Shawn Christ
assistant professor of psychological sciences, PhD, Washington University. Development of cognitive abilities in children with neurodevelopmental disorders.

Dee Cornelison
assistant professor of biological sciences, PhD, California Institute of Technology. Signaling and activity of skeletal muscle satellite cells.

Nelson Cowan
professor of psychological sciences, PhD, University of Wisconsin-Madison. Attention, short-term memory, the relation between them, and their development.

Shinghua Ding
assistant professor of biological engineering, PhD, State University of New York at Buffalo. Glial cell function and neuron-glia interactions in CNS, Stem cell differentiation and transplantation, Ion channel function and modulation.

Michael Garcia
assistant professor of biological sciences, PhD, Mayo Graduate School. Effects of myelination on axonal cytoskeleton; Role of axonal cytoskeleton in neurodegenerative diseases.

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David Geary
professor of psychological sciences, PhD, University of California at Riverside. Mechanisms that contribute to mathematical learning and the mechanisms that underlie learning disabilities in mathematics; hormonal changes that occur during men's competitive activities

Carl Gerhardt
professor of biological sciences, PhD, University of Texas-Austin. Acoustic pattern recognition in animals: neural and evolutionary implications.

Kevin Gillis
professor of biological engineering, DSc, Washington University. Studies of exocytosis using patch-clamp, optical and electrochemical techniques.

Zezong Gu
assistant professor of pathology and anatomy, PhD, University of Texas Medical Branch. Metalloproteinase proteolysis in ischemic stroke.

Steve Hackley
associate professor of psychological sciences, PhD, University of Wisconsin-Madison. Event-related potentials, startle-blink, and neuroimaging studies of perceptual-motor processes in healthy adults and in those with Parkinson's disease, epilepsy, and cortical blindness.

Mark Hannink
professor of biochemistry, PhD, University of California-San Diego. The BTB-Kelch substrate adaptor family in development, oncogenesis and neurodegeneration.

Cheryl Heesch
professor of biomedical sciences, PhD, University of Texas-San Antonio. Neurohumoral control of the circulation; CNS effects of ovarian hormones.

T-C. Hwang
professor of medical pharmacology and physiology, PhD, Johns Hopkins University. Structure-function studies of CFTR chloride channel.

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Philip Jen
professor of biological sciences, PhD, Washington University. Neuroethology; auditory physiology; sound localization; biosonar in bats.

George Johnstone
professor of health psychology, PhD, University of Georgia. Vocational outcomes of persons with traumatic brain injury; Spirituality and disability; rural rehabilitation; international rehabilitation.

Martin Katz
professor of ophthalmology, PhD, University of California-Santa Cruz. Research in inherited and age-related neurodegenerative diseases.

John Kerns
associate professor of psychological sciences, PhD, University of Illinois at Urbana-Champaign. Cognitive and affective processes in schizophrenia and the development of psychotic symptoms.

Mark Kirk
professor of biological sciences, PhD, Rice University. Stem cell therapies for neurodegenerative diseases and tumors of the CNS.

David Kline
assistant professor of biomedical sciences, PhD, Case Western Reserve University. Serotonin (5-HT)1 receptors modulate synaptic transmission and potassium current in the afferent limb of the baroreceptor reflex arc.

George Kracke
associate professor of anesthesiology, PhD, Medical College of Pennsylvania. Effects of anesthetics and analgesics on neuronal ion channels and receptors.

Cathleen Kuehl-Kovarik
assistant professor of biomedical sciences, PhD, Iowa State University. Neural control of reproduction; Intrinsic regulation of gonadotropin releasing hormone (GnRH) neurons; Changes in GnRH neurons during the aging process.

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James Lee
associate professor of biological engineering, PhD, University of Pennsylvania. Biochemical and biophysical engineering techniques including various fluorescence spectroscopy and microscopy, micropipette cell manipulation and atomic force spectroscopy to study biological systems related to human health and diseases.

Chris Lorson
associate professor of veterinary pathobiology, and molecular microbiology and immunology, PhD, University of Missouri. Spinal muscular atrophy.

Joel Maruniak
associate professor of biological sciences, PhD, University of Texas-Austin. Olfactory cell and molecular biology.

Andrew McClellan
professor of biological sciences, PhD, Case Western Reserve University. Neural regeneration following spinal cord injury; neuronal cell culture; locomotor systems.

Dennis Miller
associate professor of psychological sciences, PhD, Texas A&M University. Behavioral and neuropharmacology of nicotine and cocaine.

Satish Nair
professor of electrical and computer engineering, PhD, The Ohio State University. Dynamic modeling and control issues in systems biology; identification and uncertainty modeling using robust, adaptive and intelligent techniques; computational neuroscience, and biomechatronics.

Dennis O'Brien
professor of veterinary medicine and surgery, PhD, DVM, University of Illinois at Urbana-Champaign. Hereditary and acquired neurodegenerative diseases of domestic animals.

Mick Pettris
associate professor of biochemistry, PhD, University of Melbourne. The regulation of metal nutrition and impacts on common human diseases.

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Lixing Reneker
assistant professor of opthalmology, and biochemistry, PhD, University of Iowa. Signal transduction pathways in lens development; Factors controlling corneal endothelial cell formation and differentiation.

Jeff Rouder
professor of psychological sciences, PhD, University of California-Irvine. Human pattern recognition; Nonlinear statistical models for testing theories of cognition and perception.

Todd Schachtman
professor of psychological sciences, PhD, SUNY-Binghamton. Examination of the role of metabotropic glutamate receptors on learning and the processes underlying classical conditioning phenomena.

Heide Schatten
associate professor of veterinary pathobiology, PhD, Karl Ruprecht University in Heidelberg. Cell biology of cancer and neurodegenerative diseases.

Keith Schneider
assistant professor of psychological sciences, PhD, University of Rochester. relationship between the architecture of the human visual system and the functions of attention, perception and awareness, both in normal and clinical populations.

Johannes Schul
associate professor of biological sciences, PhD, Philipps-University Marburg (Germany). Neuroethology of acoustic communication in insects and frogs - comparative analysis of the neuronal basis of call recognition and phonotaxis.

David Schulz
assistant professor of biological sciences, PhD, University of Illinois at Urbana-Champaign. Plasticity and stability in the nervous system: Homeostatic regulation of a small neural network.

Shivendra Shukla
professor of medical pharmacology and physiology, PhD, University of Liverpool. Ethanol effects on cell signaling.

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Agnes Simonyi
research associate professor of biochemistry, PhD, University of Lorand Eotvos, Hungary. Biochemical mechanisms underlying learning and memory with particular focus on specific subtypes of metabotropic glutamate receptors.

Grace Sun
professor of biochemistry, PhD, Oregon State University. Signal transduction pathways; Stroke; Alzheimer's disease and alcoholism.

Mahesh Thakkar
assistant professor of neurology and the VA, PhD, Lawaharlal Nehru University. Neurobiology of sleep.

Gary Weisman
professor of biochemistry, PhD, University of Nebraska-Lincoln. P2 nucleotide receptors in neurodegenerative diseases.

Matthew Will
assistant professor of psychological sciences, PhD, University of Colorado-Boulder. Behavioral, pharmacological, and molecular analysis of the interaction between stress and the reinforcement process within the context of animal models of addiction.

Troy Zars
associate professor of biological sciences, PhD, University of Notre Dame. Molecular mechanisms and neural systems supporting memory formation in Drosophila.

Application and Admission Information

Admission Criteria

- Fall deadline: January 15
- Minimum TOEFL score: 600/250 (paper/computer)
- Minimum GRE score: V+Q=1200
- Bachelor's degree or its equivalent

Neuroscience comprises a united field that integrates across many disciplines, and students from a variety of academic backgrounds are encouraged to apply to the Interdisciplinary Neuroscience Program

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(INP). US residents and international applicants are strongly encouraged to apply.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Interdisciplinary Neuroscience Program:

- Departmental application
- 3 letters of recommendation
- GRE scores

Courses

See Interdisciplinary Neuroscience (NEUROSCI) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Nuclear Engineering Graduate Programs

Contact Information

Nuclear Science and Engineering Institute
E2433 Lafferre Hall
573-882-8201 or 573-882-3550
http://nsei.missouri.edu/

About the Nuclear Science and Engineering Institute

Recent changes to the MU nuclear engineering program included the creation of a Nuclear Science and Engineering Institute (NSEI). As the result, MU's entire nuclear engineering program has been transferred to the Institute, including all graduate degree programs and curriculum under the nuclear program.

Under the auspice of the Graduate School, the NSEI provides an organizational structure to coordinate and facilitate interdisciplinary research and educational programs among a diverse group of nuclear science and engineering investigators; aid the development of strong and innovative educational and research opportunities; serve as a local, regional and national resource for academic, governmental and corporate entities; and integrate the facilities, teaching and research strengths of the Missouri University Research Reactor (MURR) Center and related MU academic departments.

Areas of Study

Area research topics include nuclear materials management, aerosol mechanics, reactor safety analysis, nuclear energy conversion, reactor physics, reactor design, nondestructive testing and measurement, radiative heat transfer, neutron spectrometry, neutron and gamma ray transport, neutron activation analysis, nuclear waste management, nuclear plasma research, health physics, magnetic resonance imaging, radiation therapy and alternative and renewable energy concepts.

Recent research has been developed in wide band-gap material

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production and utilization. This work includes the development of electronic circuits from diamond films and other wide band-gap electronic materials, and the use of diamonds to modify the mechanical, optical, electrical and chemical properties of materials.

Resources and Facilities
Area research is conducted in several special facilities and laboratories. The Research Reactor Center, a 10-megawatt facility, has the highest power and the highest steady-state neutron flux of any U.S. university reactor. Surrounding the reactor is a 26,000-square foot laboratory facility for nuclear research.

Other facilities include the Particulate Systems Research Center, a plasma fusion laboratory, nuclear instrumentation laboratory, a radioactive experiment laboratory and the needed digital computers, printers, etc., in labs and student offices.

Nuclear Engineering Faculty

Core Faculty

Tushar K. Ghosh
professor, nuclear engineering; PhD, Oklahoma State University.

Sudarshan K. Loyalka
Curators' Professor, nuclear engineering; professor, chemical engineering, PhD, Stanford University.

William H. Miller
professor, nuclear engineering; PhD, University of Missouri.

Mark A. Prelas
H.O. Croft Professor, nuclear engineering; PhD, University of Illinois.

Robert V. Tompson, Jr.
associate professor, nuclear engineering; PhD, University of Missouri.

Emeritus Faculty

Dabir Viswanath
professor, chemistry, Nuclear Science and Engineering Institute; PhD, University of Rochester.

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Wynn A. Volkert
Curator's Professor of radiological sciences; professor, biological sciences; professor, Nuclear Science and Engineering Institute; PhD, University of Missouri.

Adjunct Faculty

Bryan Becker
professor, University of Missouri-Kansas City; adjunct professor, Nuclear Science and Engineering Institute; PhD, University of Tennessee, Knoxville.

Douglas Berning
Nuclear Nonproliferation Division, Los Alamos National Laboratory; adjunct professor, Nuclear Science and Engineering Institute; PhD, University of Missouri.

David Bodde
professor, University of Missouri-Kansas City; adjunct professor, Nuclear Science and Engineering Institute; PhD, Harvard University.

Robert Brugger
professor emeritus, Nuclear Science and Engineering Institute.

James Case
nuclear cardiology, cardiovascular consulting, associate professor, School of Medicine, UMKC; adjunct professor, Nuclear Science and Engineering Institute; PhD, University of Massachusetts-Amherst.

H.R. Chandrasekhar
professor, physics, University of Missouri; adjunct professor, Nuclear Science and Engineering Institute; PhD, Purdue University.

Meera Chandrasekhar
professor, physics, University of Missouri; adjunct professor, Nuclear Science and Engineering Institute; PhD, Brown University.

Jack Crawford
Environmental Health and Safety Assistant Director, Radiation Safety Officer, University of Missouri; adjunct instructor, Nuclear Science and Engineering Institute; MS, University of Missouri.

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Gordon D. Christensen
professor, medicine, infectious diseases, University of Missouri; adjunct professor, Nuclear Science and Engineering Institute; MD, Creighton University.

James Cullom
physicist, nuclear cardiology, cardiovascular consulting, Kansas City; adjunct professor, Nuclear Science and Engineering Institute; PhD, University of South Florida.

Randy D. Curry
Logan Distinguished Professor, director of the Center for Physical and Power Electronics, Electrical and Computer Engineering, University of Missouri; adjunct professor, Nuclear Science and Engineering Institute; PhD, University of St. Andrews.

Cathy S. Cutler
senior research scientist, MURR; adjunct professor, Nuclear Science and Engineering Institute; PhD, University of Cincinnati.

Julie Dawson
chief medical physicist, associate professor, radiation oncology, St. Louis University; adjunct professor, Nuclear Science and Engineering Institute; PhD, University of Missouri.

David DeCroix
team leader for the D-5 computational fluid dynamics (CFD) and aerosol transport team, Los Alamos National Laboratory; adjunct professor, Nuclear Science and Engineering Institute; PhD, North Carolina State.

Michael J. Devaney
professor, electrical and computer engineering; professor, Nuclear Science and Engineering Institute; PhD, University of Missouri.

Ted Doerr
Meteorology and Air Quality (ENV-MAQ), Los Alamos National Laboratory; adjunct professor, Nuclear Science and Engineering Institute; PhD, Texas A&M University.

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Robert Duncan
vice chancellor for research, University of Missouri; adjunct professor, Nuclear Science and Engineering Institute; PhD, University of California-Santa Barbara.

Jeff W. Eerkens
Associate Research Professor, Nuclear Science and Engineering Institute, PhD, University of California-Berkeley.

Gary J. Ehrhardt
senior research scientist, MURR; assistant research professor, radiology; adjunct professor, chemistry; adjunct professor, Nuclear Science and Engineering Institute; PhD, Washington University.

Steven Fernandez
senior research scientist, Oak Ridge National Laboratory; adjunct professor, Nuclear Science and Engineering Institute; PhD, University of Idaho.

John Gahl
senior research scientist, MURR; professor, electrical and computer engineering, University of Missouri; adjunct professor, Nuclear Science and Engineering Institute; PhD, Texas Tech University.

Keshab Gangopadhyay
adjunct professor, electrical and computer engineering, University of Missouri; adjunct professor, Nuclear Science and Engineering Institute; PhD, Indian Institute of Technology, Kanpur, India.

Michael F. Giblin
research assistant professor, radiology, University of Missouri; adjunct research assistant professor, Nuclear Science and Engineering Institute; PhD, University of Missouri.

Michael Glascock
research assistant professor, MURR; adjunct professor, Nuclear Science and Engineering Institute; PhD, Iowa State University.

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Sreekrishna Goddu
assistant professor of radiation oncology, Washington University in St. Louis; adjunct assistant professor, Nuclear Science and Engineering Institute; PhD, Andhra University, Waltair, India.

Vellore S. Gopalaratnam
professor, civil and environmental engineering, University of Missouri; adjunct professor, Nuclear Science and Engineering Institute; PhD, Northwestern University.

Christopher Graham
adjunct instructor, Nuclear Science and Engineering Institute; MS, University of Missouri.

Timothy J. Hoffman
professor, medicine, hematology and oncology; adjunct professor, Nuclear Science and Engineering Institute; PhD, University of Missouri.

Bai-Ling Hsu
adjunct assistant professor, Nuclear Science and Engineering Institute; PhD, University of Missouri.

David Huang
chief medical physicist, Memorial Sloan Kettering Cancer Center, Mercy Medical Center; adjunct professor, Nuclear Science and Engineering Institute; PhD, Temple University.

Gary Hughes
adjunct professor, Nuclear Science and Engineering Institute; PhD, University of Missouri.

Enrique Izaguirre
instructor, Department of Radiation Oncology, Washington University in St. Louis; adjunct instructor, Nuclear Science and Engineering Institute; PhD, Drexel University, Philadelphia.

David Jonassen
professor, School of Information Science and Learning Technologies, University of Missouri; adjunct professor, Nuclear Science and Engineering Institute; EdD, Temple University.

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Silvia S. Jurisson
professor, chemistry; professor, radiology, University of Missouri; adjunct professor, Nuclear Science and Engineering Institute; PhD, University of Cincinnati.

Kattesh V. Katti
professor, senior research scientist, radiology; adjunct professor, Chemistry, MU, Adjunct Professor, Nuclear Science and Engineering Institute, PhD, Indian Institute of Science.

William Kennedy
senior physicist, Ellis Fischel Cancer Center; adjunct professor, Nuclear Science and Engineering Institute; PhD, University of California-Berkeley.

Eric E. Klein
professor, Department of Radiation Oncology, Washington University School of Medicine; adjunct professor, Nuclear Science and Engineering Institute; PhD, Chicago Medical School/Rosalind Franklin University.

Arvind Kumar
professor, Missouri University of Science and Technology; adjunct professor, Nuclear Science and Engineering Institute; PhD, University of California, Berkley.

Jay Kunze
professor, Idaho State University; adjunct professor, Nuclear Science and Engineering Institute; PhD, Carnegie-Mellon.

Kiratadas Kutikkad
adjunct associate professor, research scientist, MURR; PhD, University of Florida.

Jimmy C. Lattimer
associate professor, veterinary medicine and surgery, University of Missouri; adjunct associate professor, Nuclear Science and Engineering Institute; DVM, Washington State University.

continued on next page

John R. Lever
associate professor, radiology, University of Missouri; adjunct associate professor, Nuclear Science and Engineering Institute, PhD, North Carolina State University.

Michael R. Lewis
associate Professor, veterinary medicine and surgery, University of Missouri; adjunct associate professor, Nuclear Science and Engineering Institute; PhD, City of Hope Graduate School of Biological Sciences.

Harold Li
assistant professor, Department of Radiation Oncology, Washington University in St. Louis; adjunct assistant professor, Nuclear Science and Engineering Institute; PhD, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany.

Andrei Lipson
adjunct professor, Russian Academy of Sciences; adjunct professor, Nuclear Science and Engineering Institute; PhD, Institute of Physical Chemistry, Moscow.

William Logan
physicist, Ellis Fischel Cancer Center, University of Missouri; adjunct professor, Nuclear Science and Engineering Institute.

Daniel Low
professor, director of Medical Physics Division, Department of Radiation Oncology, Washington University in St. Louis; adjunct professor, Nuclear Science and Engineering Institute; PhD, Indiana University-Bloomington.

Wei Lu
instructor, Department of Radiation Oncology, Washington University in St. Louis; adjunct instructor, Nuclear Science and Engineering Institute, PhD, University of Missouri.

Lixin Ma
assistant professor, radiology, University of Missouri Hospital and Clinics; adjunct assistant professor, Nuclear Science and Engineering Institute; PhD, University of Copenhagen, Denmark.

continued on next page

Rose Marra
associate professor, School of Information Science and Learning Technologies, University of Missouri; adjunct assistant professor, Nuclear Science and Engineering Institute; PhD, University of Colorado.

Paul F. Miceli
Professor, Physics, MU, Adjunct Professor, Nuclear Science and Engineering Institute, PhD, University of Illinois-Urbana/Champaign.

Wouter T. Montfrooij
associate professor, physics, University of Missouri; adjunct associate professor, Nuclear Science and Engineering Institute; PhD, University of Delft.

David O'Brien
Los Alamos National Laboratory; adjunct professor, Nuclear Science and Engineering Institute; PhD, Rensselaer Polytechnic Institute.

John O'Hara
systems engineering and safety analysis, Brookhaven National Laboratory; adjunct professor, Nuclear Science and Engineering Institute; PhD, Adelphi University.

Thomas P. Quinn
professor, director of Structural Biology Core, biochemistry/molecular biology, University of Missouri; adjunct professor, Nuclear Science and Engineering Institute; PhD, St. Louis University.

Dharanipathy Rangaraj
instructor, Department of Radiation Oncology, Washington University in St. Louis; adjunct assistant professor, Nuclear Science and Engineering Institute, PhD, University of Missouri.

Charles Riggs
chief chemist, Callaway Nuclear Power Plant, AmerenUE; adjunct assistant professor, Nuclear Science and Engineering Institute, PhD, University of Missouri.

continued on next page

J. David Robertson
director of education and development, MURR; professor, chemistry, University of Missouri; adjunct professor, Nuclear Science and Engineering Institute; PhD, University of Maryland.

Amolak Singh
professor, program director and chief, Division of Nuclear Medicine, Department of Radiology, University of Missouri; adjunct professor, Nuclear Science and Engineering Institute; MD, Amritsar Medical College, Punjab, India.

Annie Sobel
assistant to the provost for strategic opportunities; adjunct professor in family and community medicine, adjunct professor in electrical and computer engineering; adjunct professor, Nuclear Science and Engineering Institute; MD, Case Western Reserve University of Medicine.

Gordon K. Springer
associate professor, computer science, University of Missouri; adjunct associate professor, Nuclear Science and Engineering Institute; PhD, Pennsylvania State University.

Haskell Taub
professor, physics, University of Missouri; adjunct professor, Nuclear Science and Engineering Institute; PhD, Cornell University.

Herbert Tillema
professor, political science, University of Missouri; adjunct professor, Nuclear Science and Engineering Institute; PhD, Harvard University.

G. Loren Toole
Task Lead for Infrastructure Projects, TSM-D4, Los Alamos National Laboratory; adjunct instructor, Nuclear Science and Engineering Institute; MS, Georgia Institute of Technology.

Kathleen M. Trauth
associate professor, civil and environmental engineering, University of Missouri; adjunct associate professor, Nuclear Science and Engineering Institute; PhD, Texas Tech University.

continued on next page

Harry W. Tyrer
professor, electrical and computer engineering, University of Missouri; adjunct professor, Nuclear Science and Engineering Institute; PhD, Duke University.

Wynn A. Volkert
Curator's Professor of Radiological Sciences; professor of biological sciences, University of Missouri; professor emeritus, Nuclear Science and Engineering Institute; PhD, University of Missouri.

Laurie Waters
D-10/D-5 Nuclear Design and Risk Analysis Group, Los Alamos National Laboratory; adjunct professor, Nuclear Science and Engineering Institute; PhD, State University of New York.

R. Andrew Winholtz
associate professor, mechanical and aerospace engineering, University of Missouri; adjunct associate professor, Nuclear Science and Engineering Institute; PhD, Northwestern University.

David L. Worcester
associate professor, biological sciences, University of Missouri; adjunct associate professor, Nuclear Science and Engineering Institute; PhD, Harvard University.

Deshan Yang
instructor, Department of Radiation Oncology, Washington University in St. Louis; adjunct instructor, Nuclear Science and Engineering Institute; PhD, University of Wisconsin, Madison.

William Yellon
adjunct professor, Nuclear Science and Engineering Institute; PhD, Carnegie-Mellon University.

Ping Yu
associate professor, physics, University of Missouri; adjunct associate professor, Nuclear Science and Engineering Institute; PhD, Hong Kong University of Science & Technology.

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Application and Admission Information

Master's & Doctoral Admission

Contact Information
NSEI Admissions
E2433 Lafferre Hall
Columbia, MO 65211
573-882-8201

Admission Criteria

- Fall deadline: May 1
- Spring deadline: December 1
- Minimum TOEFL score: 500/173 (paper/computer) 61(internet) (international applicants)
- Minimum GRE score: none set
- Minimum GPA: 3.0 during last 2 years
- Undergraduate degree (with a strong math and physics background) in an engineering field, physics, biology, chemistry or mathematics from an accredited institution.

Required Application Materials

To the Office of the Graduate School:

- All required Graduate School documents
- 3 letters of recommendation and the online recommendation form from previous instructors or technical employers who are familiar with the student's qualifications for graduate study, submitted directly online through the application. (If the student is applying to the PhD program, one of these letters must be from the MS adviser.)
- Statement of Purpose (uploaded via online application)

To the NSEI Program:

- Official GRE score report

Financial Assistance from the Program

The application form for the Nuclear Science and Engineering Institute is used to automatically consider an applicant for financial assistance. In the Nuclear Engineering program, financial assistance includes federal (Department of Energy), industrial (primarily electrical utility and Institute for Nuclear Power Operations) and MU fellowships, teaching and research assistantships and sponsored research assistantships. MU is a participating university in the Department of Energy Fellowships

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in Nuclear Engineering, Health Physics, Traineeships in Health Physics, Waste Management and Environmental Sciences.

Students on probation and international students with no prior educational record in the United States are usually not eligible for financial assistance during the first semester of their programs. However, those who perform satisfactorily during their first semester are then eligible for consideration for research assistantship appointments during their second semester.

Master of Science in Nuclear Engineering

Preparation for the Program

Students with degrees in physics or chemistry are generally adequately prepared for the nuclear engineering graduate program. Those from other backgrounds may be required to complete engineering undergraduate courses in thermodynamics, advanced engineering mathematics and the full complement of calculus-based physics, based on the student's particular experience.

Plan of Study

The nuclear engineering master's degree program requires 31 hours, including a research project or thesis. The requirements are based on the assumption that the student is entering graduate study with a bachelor's degree in engineering from an ABET-accredited school. An original research project is required either in the form of a three-credit master's project or a six-credit master's thesis. Typical time-to-degree completion for the master's degree is 18 months.

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Doctorate in Nuclear Engineering

Qualifying Examination

The PhD program is a research program and is tailored to meet specific educational needs. To qualify for the research phase of the PhD program, the student must pass a comprehensive, multipart qualifying examination, usually administered during the first semester of study for the PhD.

Emphasis Areas

Several emphasis areas of study are available to students.

Power Engineering

Two options exist with an emphasis on power engineering:

1. Basic nuclear engineering program (for students emphasizing fission or fusion processes)
2. Nuclear power engineering program (for students with bachelor's degrees in electrical engineering).

Students in either of these programs must meet the basic criteria for entering graduate study in nuclear engineering.

Health Physics

An option in health physics is devoted to the study of the protection of people and the environment from radiation and environmental contaminants. Health physics is concerned with dosimetry, shielding design, radiation biology and instrumentation development and the development and implementation of the methods and procedures to evaluate and deal with environmental hazards (particularly with the measurement and effects of low levels of radiation, both natural and man-made, in the environment). The program includes a one- to two-credit practicum in a job training setting and a three-credit research project. Students pursuing a PhD in this option will select a suitable dissertation topic in nuclear engineering, with emphasis in health physics.

Medical Physics

The medical physics option emphasizes five areas of study: radiology, diagnostics, nuclear medicine, radiation therapy and health physics applications in medical practice.

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Medical physics applies physics and engineering concepts and methods to the diagnosis and treatment of human disease with emphasis on engineering design and utilization of the machines for this purpose. The curriculum includes a three-credit research project and a practicum as in the health physics option. Students pursuing a PhD in this option will select a suitable dissertation topic in nuclear engineering, with emphasis in medical physics.

The NSEI faculty will help students identify opportunities for students to arrange practical training if they have interest in entering the clinical field.

PhD Plan of Study
If the student is entering the PhD program, the planned course of study will be individually evaluated by the nuclear engineering faculty. A comprehensive examination covering the student's dissertation topic is required at least one semester before anticipated graduation.

The PhD degree is a research degree, with a suitable dissertation topic to be chosen in the respective field and usually requires 24 classroom credits of advanced courses beyond the MS degree and 18 credits of research. Typical time-to-degree completion for the PhD degree is three years past the MS degree.

Graduate Certificate in Nuclear Engineering

Eligibility & Mission
The objective of the graduate certificate in Nuclear Engineering is to provide graduate students and professional, non-degree students from various engineering and science departments at MU with a unique opportunity to develop expertise in nuclear engineering that will enhance their job opportunities in the nuclear field.

Requirements for Graduate Certificate in Nuclear Engineering
Students will be required to take the 12 credit hours of coursework from the Nuclear Engineering (NE) degree program curriculum. Co-listed courses with the Nuclear Science and Engineering Institute NE classes may be considered towards this requirement. As permitted by the University Policy regarding Graduate Certificate offerings, a maximum of 6 credit hours may be count for both degree course credit within

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their department and the Graduate Certificate in Nuclear Engineering. However, total credit hours needed to complete their degree need not exceed Departmental or Graduate School requirements. Students will be required to take courses that broaden their knowledge and understanding in nuclear engineering. The student must complete a Change of Academic Program form to enter the program. The student must also complete the "Course of Study for Graduate Certificate" form, which must be approved by NSEI before taking any courses. **Without this prior approval, the NSEI has the authority to deny the certificate.** A student's advisor and graduate committee from the host department and the Graduate Studies Director in the Nuclear Science and Engineering Institute will approve the courses. The selection of courses is restricted to the 7000 level or above and all courses must be successfully completed with a final grade of 'B' or above. Courses must be selected from the list shown in Table 1 at the certificate's website (http://nsei.missouri.edu/graduateCertification.html), and documented on the Graduate School's "*Course of Study for Graduate Certificate*" form. Course credit hours for the certificate could also be applied towards the total credit hours needed for the departmental degree requirements, if accepted by the student's department.

Course Work

Students should take at least one course from each of the first three clusters listed in Table 1. The student may choose their fourth course from either Basic Radiation Science Cluster or from any of the four (I, II, III, IV) clusters at the certificate's website (http://nsei.missouri.edu/graduateCertification.html). A minimum of 12 credit hours must be documented (using the Course of Study for Graduate Certificate form) in order to qualify for the Graduate Certificate in Nuclear Engineering.

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Graduate Certificate in Nuclear Safeguards Science and Technology at the University of Missouri

For additional information, contact:

Dr. Tushar Ghosh, professor of Nuclear Engineering, 573-882-9736, GhoshT@missouri.edu, or
Dr. John Gahl, professor of Electrical Engineering, 573-884-7414, GahlJ@missouri.edu/.

Certificate Objectives and Requirements

The objective of offering the Graduate Certificate in Nuclear Safeguards is to provide graduate students and professional, non-degree-seeking, students in various engineering disciplines with an opportunity to develop unique skills and expertise that will enhance their performance in jobs requiring knowledge of nuclear material protection, control and accountability.

The graduate certificate program serves degree-seeking graduate students and also functions as a stand-alone graduate certificate program for professional, non-degree-seeking students. Both degree-seeking and non-degree-seeking students will be required to take four specific classes (12 credit hours) involving nuclear science, policy and safeguards. The student must complete a Change of Academic Program form to enter the program. The student must also complete the "Course of Study for Graduate Certificate" form, which must be approved by NSEI before taking any courses. **Without this prior approval, the NSEI has the authority to deny the certificate.**

For MU students, a maximum of 6 credit hours may be counted for both degree course credit within their department and the Graduate Certificate in Nuclear Safeguards. However, total credit hours needed to complete their degrees need not exceed departmental or Graduate School requirements (see http://gradschool.missouri.edu/policies/graduate-catalog/archive/0708gradcatalog.pdf for additional information, or contact Dr. Gahl)

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Plan of Study

Four specific classes, comprising 12 hours of course credit, are required for a student to receive this graduate certificate in nuclear safeguards:

ECE 7335: Nuclear Safeguards Science and Technology (co-listed as NU ENG 7335)
This course provides an overview of nuclear materials management and safeguards, including physical protection systems, material accounting and control, monitoring and regulatory issues. Prerequisites: NU ENG 4303/7303.

NE 7331: Nonproliferation Issues for Weapons of Mass Destruction
Nonproliferation and impact on technology and world events.

NE 7303: Radiation Safety
Types and origins of radiation; radiation detection and measurement; radiation interactions; shielding; dose calculations; federal, state and local regulations; and procedures for safe uses of radiation. Laboratory experiments in radiation measurements and protection.

NE 7391: Nuclear Radiation Detection
Principles and application of radiation detectors and analyzers: ionization, Geiger-Muller, proportional, liquid and solid scintillation, semiconductor, pulse height analyzers, coincidence circuits, data reduction, tracer applications, activation analysis. Lectures, laboratory.

Courses

See Nuclear Engineering (NU ENG) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Nursing Graduate Programs

Contact Information

Sinclair School of Nursing
S235 Sinclair School of Nursing Building
573-882-0277
http://nursing.missouri.edu/

About the Sinclair School of Nursing

Nursing was an integral part of the Parker Memorial Hospital Training School, which served as the University's first hospital in 1901. Although a nursing program was not officially established until 1920 within the School of Medicine, MU graduated its first nursing class in 1904. Sixteen years later, the Curators approved a Graduate Nursing designation. Today, the Sinclair School of Nursing provides a rich and rewarding learning environment for our students. Our faculty include knowledgeable and skillful teachers, respected scholars and researchers in the nursing profession, and experienced, caring practitioners. The master's program is accredited by the Commission on Collegiate Nursing Education, One Dupont Circle, NW, Suite 530,Washington, DC 20036, (202) 887-6791.

Degrees Offered

- Master of Science
- Doctor of Philosophy
- Doctor of Nursing Practice

Facilities and Resources

Graduate students in the School of Nursing have access to all campus libraries and the various services they provide. The School of Nursing building is adjacent to University Hospital and Clinics, which house the Children's Hospital and Ellis Fischel Cancer Center and Columbia Regional Hospital which is off-site. Other clinical agencies in the immediate vicinity include Truman Veterans Hospital and Mid-Missouri Mental Health Center. A variety of learning experiences also are available at other hospital and health and social service agencies in and around Columbia.

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Career Opportunities
Nursing is a professional career for those who would like to combine the following words in any number of ways: challenge, service, variety, skills, experience, science, and meaningful work. Graduates of our program work in a variety of settings - from hospital intensive care units, to community organizations and schools, to areas of research and teaching.

Funding
Financial assistance is available as scholarships, fellowships, assistantships and traineeships.

Graduate Nursing Faculty

Judith Miller
dean, PhD, University of Illinois at Chicago. Fellow of the American Academy of Nursing.

Roxanne McDaniel
associate dean, academic programs, associate professor, PhD, University of Texas-Austin. Adult nursing, oncology, chronic disease management, nursing education.

Vicki Conn
associate dean for research, director of research, professor, PhD, University of Missouri. Adult nursing, gerontological nursing, exercise, medication adherence. Fellow of the American Academy of Nursing.

Kay Libbus
director PhD program, professor, DrPH, University of Texas-Houston. Public health, Health of Women and Children, infectious and communicable disease.

Jane Armer
professor, PhD, University of Rochester. Breast cancer, lymphedema, chronic disease management.

Lawrence Ganong
professor, PhD, University of Missouri. Human development and family studies.

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Marilyn Rantz
professor, PhD, University of Wisconsin-Milwaukee. Nursing administration, gerontological nursing. Fellow of the American Academy of Nursing.

Myra Aud
associate professor, PhD, St. Louis University. Gerontological nursing.

Jane Bostick
associate teaching professor, PhD, University of Missouri. Community mental health nursing, nursing education, gerontology.

Constance Brooks
adjunct associate professor, PhD, University of Missouri. Public health, adult mental health nursing, interpersonal relations.

Deborah Finfgeld-Connett
associate professor, PhD, University of Texas-Austin. Mental health, women's health, substance abuse, concept development.

Debra Gayer
associate teaching professor, PhD, University of Missouri. Family-child nursing, health outcomes of special needs children, web-based nursing education.

Rebecca Johnson
associate professor, PhD, University of Iowa. Adult nursing, gerontological nursing, human-companion animal bonding and wellness. Fellow of the American Academy of Nursing.

Louise Miller
associate teaching professor, PhD, University of Missouri. Community and public health.

Cindy Russell
associate professor, PhD, St. Louis University. Adult nursing, transplant, chronic disease management.

Deidre d'Amour Wipke-Tevis
associate professor, PhD, University of California-San Francisco. Adult health, wound healing, chronic disease management.

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Greg Alexander
assistant professor, PhD, University of Missouri. Health informatics, human computer interaction, clinical decision support systems.

Cheryl Bausler
assistant teaching professor, PhD, University of Missouri. Adult health.

Tina Bloom
assistant professor, PhD, Oregon Health & Science University. Intimate partner violence and violence prevention interventions, maternal-child health, collaborative and community-based research.

Gina Oliver
assistant teaching professor, PhD, St. Louis University. Adult health, critical care nursing, nursing education.

Lorraine Phillips
assistant professor, PhD, The University of Texas at Austin. Women's health, disablement process in persons with chronic disabling conditions.

Lori Popejoy
assistant professor, PhD, University of Missouri. Adult nursing, gerontological nursing.

Patricia Schnitzer
associate professor, PhD, University of North Carolina at Chapel Hill. Occupational health, public health, epidemiology, pediatrics.

Sherri Ulbrich
adjunct assistant professor, PhD, University of Missouri. Physical activity, exercise, health behavior change, cardiac risk factor modification.

Amy Vogelsmeier
assistant professor, PhD, University of Missouri. Gerontological nursing, healthcare systems.

Bonnie Wakefield
associate research professor, PhD, University of Iowa College of Nursing. Quality Assurance and aging.

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Sarah Breier
adjunct assistant professor, PhD, University of Tasmania (Australia). Adult nursing, clinical nutritional support, end-of-life care.

Lila Pennington
assistant teaching professor, DNP, University of Tennessee. Family and Gerontological nurse practitioner.

Master of Science in Nursing

Admission Contact Information

http://nursing.missouri.edu/
S246 School of Nursing
Columbia, MO 65211
573-882-0200

Admission Criteria for the Master of Science in Nursing

Deadline for Fall or Summer entrance: February 1

- Minimum TOEFL score: 600/250/100 (Paper/Computer/Internet).
- Will accept IELTS scores for English proficiency on a case-by-case basis.
- Graduate School requires TOEFL scores of: 500/173/61 (Paper/Computer/Internet)
- GRE waived for applicants that have a grade point average equal to or higher than the 3.3 for the last 60 hours of course work.
- A bachelor of science in nursing from an accredited baccalaureate nursing program
- Minimum GPA of 3.0 (A=4.0) for the last 60 credit hours of the baccalaureate degree
- Current licensure as a Registered Professional Nurse

Admission to the Master's Program is competitive and on a space-available basis.

Admission to Family and Pediatric Nurse Practitioner Areas of Study is based on the following criteria:

- one to two years of clinical experience as an RN
- a personal interview may be required

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Required Application Materials for the Master of Science in Nursing

To the Graduate School:
Online application - https://app.applyyourself.com/?id=umc-grad
$45 application fee

To the Master of Science in Nursing Program:
http://nursing.missouri.edu/apply/master-of-science/index.php

- Departmental application
- 2 letters of recommendation (use the form provided)
- Personal narrative
- Résumé
- Immunization records
- CPR certification

International Student Admission for Nursing MS and PhD Degrees

All international admissions are initially the responsibility of the MU Coordinator of International Student Programs. The Student Admissions and Progression Committee of the School of Nursing may not act upon any international application for admission until the applicant has been cleared through the office.

In addition to the requirements above and the requirements set forth by the Office of International Student Programs, international applicants must provide evidence of the following:

- Master of Science students must have a temporary license to practice nursing in the State of Missouri. This license must be obtained before admission. PhD students are not required to have a Missouri nursing license but are required to have a nursing license in their place of residence.
- Passing scores on all sections of the State Board Test Pool Examination. This examination must be written on the first testing date following award of the temporary license. Failure on any section of the State Board Examination necessitates dismissal from the graduate program in nursing.

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other

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funding packages. Check the program Web site or ask the program contact for details.

Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Areas of Study for the MS program

Students in the Master of Science program obtain advanced practice preparation in one of three areas: health restoration/support; health promotion/protection; or health-care systems. All of these areas of study are available at the doctoral level.

Health/Restoration Support
Students in this area prepare as clinical nurse specialists. An area of specialization is achieved by the selection of a population of choice across the life span. Also, students may choose to focus on the roles of educator, administrator, or some combination of these roles, such as clinical nurse specialist/educator.

Health Promotion/Protection
Students in this area may prepare for certification as nurse practitioners in mental health, family, and pediatric or as clinical nurse specialists in mental health, public health or school health.

Health Care Systems
This area prepares students for nursing leadership roles in acute care or community settings. In addition, students may include a minor in business administration.

Master of Science in Nursing Progression Requirements

The MS in nursing requires a minimum of 31 credit hours beyond the baccalaureate degree; the total hours vary according to the area of study. For satisfactory progress, students must maintain a GPA of

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3.0 and be continually enrolled during fall and spring semesters until completion of the degree.

Thesis or Master's Exam
Each candidate must pass a final examination to demonstrate mastery of the fundamental principles of the work included in the course of study offered for the degree. This requirement may be fulfilled by completion of a thesis or the Master's Exam (MS exam). The MS exam consists of a paper that should reflect the graduate student's grasp and synthesis of the clinical and theoretical knowledge gained in the course of study.

To satisfy requirements for the MS, a student must:
- Complete an approved program with a cumulative GPA of 3.0
- Successfully defend a written thesis or complete the MS Exam
- Complete the program within a five-year period

Doctor of Philosophy (PhD) in Nursing

Admission Contact Information
nursing@missouri.edu
S246 School of Nursing
Columbia, MO 65211
573-882-0200

Admission Criteria for the Doctorate in Nursing
The MU Sinclair School of Nursing's PhD program is distance mediated beginning Summer Semester 2010. Students are expected to spend one week on campus each summer beginning with the summer they are admitted to the program. The deadline for Summer admission to the PhD program is February 1.
- Minimum TOEFL score: 600/213 (Paper/Internet). Will accept IELTS scores for English proficiency on a case-by-case basis. Besides the TOEFL, both the Test of Written English (TWE) and the Test of Spoken English (TSE) may be required.
- Preferred scores for the GRE within 5 years of application are a 1000 minimum for Verbal and Quantitative combined with a minimum of 4.5 for analytic writing.
- Graduate of an accredited baccalaureate program with a 3.2

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minimum GPA (4.0 scale) or graduate of an accredited master's program with a 3.5 minimum GPA
- After application materials are reviewed, qualified applicants will be contacted for an interview.

Required Application Materials for the Doctorate in Nursing

To the Graduate School:
- All required Graduate School documents

To the Doctorate in Nursing Program:
http://nursing.missouri.edu/apply/phd/index.php
- Departmental application
- 3 letters of recommendation (use the form provided at the school of nursing website)
- Official GRE score report
- Original essay on research and professional goals and identification of a faculty research mentor

International Student Admission for Nursing MS and PhD Degrees – click here for information

Career Preparation

The PhD program in nursing prepares nurse-scholars to assume leadership roles in nursing and health care; advance the body of knowledge that guides the practice of nursing; conduct nursing research; and participate in developing social and health policy.

Doctor of Philosophy in Nursing Curricula

There are two curricular options: (a) post-baccalaureate (BSN-PhD) and (b) post-master's (MSN-PhD). For both options, the doctoral curriculum is divided into three categories:
- nursing content areas (nursing theory analysis and development; nursing applied sciences)
- modes of inquiry (philosophy of science, statistics and measurement, qualitative and quantitative methods courses in nursing and other disciplines)
- a collateral field outside the discipline of nursing.

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Doctor of Philosophy in Nursing Areas of Study

As a general focus, each student selects one of three substantive areas of nursing science: health-care systems, health promotion and protection, or health restoration and support.

Health-Care Systems

Students who select health-care systems as a substantive area of study may include:

- Nursing and health-care delivery models
- Political and historical development of models
- Informatics and intelligence systems

Health Promotion & Protection

Students who choose health promotion and protection may include:

- Health-promoting behaviors of individuals, groups, and populations
- Prevention of acute and chronic disease
- Effects of individual, family, and community choices on health and illness

Health Restoration & Support

Students who select health restoration and support may include:

- Human responses to acute, critical and chronic health conditions
- The effects of specific diseases on individuals and families
- Physiological and psychosocial responses to disease

Partnerships

The PhD in nursing collaborates with the other UM system schools of nursing offering several common courses and a common curriculum framework. Faculty may serve on dissertation committees for students across the campuses as appropriate. The three campuses collaborate in offering a research day for graduate students.

Doctor of Philosophy in Nursing Progression Requirements

The PhD in nursing requires a minimum of 72 credits beyond the baccalaureate degree; the doctoral program committee sets the total hours. Forty-two of the 72 hours must be completed at the University of

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Missouri and distance mediated courses do count.

MSN-PhD option credits may be applied from the master's degree. All graduate students must maintain a 3.0 GPA to complete the degree.

Bachelor's to PhD Students
BSN-PhD students are admitted to the program on a provisional basis. Successful completion of a qualifying process is required for official admission. Students must maintain a 3.0 GPA and earn at least a B in N7100 (Nursing Theory), N7150 (Nursing Research), graduate level statistics and three (three-credit) courses in nursing applied sciences. The student initiates the qualifying process by enrolling and successfully completing three credits of N8900 with a member of the program committee.

Residency Requirements for All PhD Students
All students fulfill the residency requirement by taking nine credits in each of two consecutive semesters or six credits in each of three consecutive semesters in an 18-month period. Residency hours are earned through distance mediated courses.

Doctor of Philosophy in Nursing Candidacy
To attain candidacy, students must successfully complete all courses on the plan of study that they develop with the doctoral program committee. Also, they must pass the written and oral components of the comprehensive examination. After attaining candidacy the student will complete the dissertation, which is written on a subject approved by the program committee,

Doctor of Nursing Practice

Admission Contact Information
http://nursing.missouri.edu/
S246 School of Nursing
Columbia, MO 65211
573-882-0200

Admission Criteria for the Doctor of Nursing Practice
Deadline for Summer Entrance: November 15

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- Minimum TOEFL score: 600/250/100 (Paper/Computer/Internet
  - Will accept IELTS scores for English proficiency on a case-by-case basis. Graduate School requires TOEFL scores of: 500/173/61 (Paper/Computer/Internet)

- GRE waived for applicants that have a grade point average equal to or higher than the 3.3 for the last 60 hours of course work.

- Completed application for admission to the MU Graduate School at the University of Missouri (including $45 for U.S. citizens, $60 for nonresident international applicants).

- Completed application for admission to the DNP program at the MU Sinclair School of Nursing (include $50.00 application fee).

- Submission of all official transcripts documenting a baccalaureate or master degree in Nursing from a program accredited by a national organization responsible for nursing accreditation (i.e. National League for Nursing Accrediting Commission (NLNAC) or Commission on Collegiate Nursing Education (CCNE))

- A grade point average (GPA) of 3.3 on a 4.0 scale based on the last 60 hours of undergraduate nursing course work for applicants with less than a master's degree.

- A cumulative GPA of 3.5 on a 4.0 scale for applicants with a master's degree in nursing.

- Applicants who do not meet the minimum GPA requirements must submit acceptable scores on the Graduate Record Exam (GRE) and the exam must have been taken within the last five years.

- Applicants who do not meet the minimum GPA requirements also may provide additional evidence documenting examples of outstanding professional leadership, practice, and/or scholarship for special consideration.

- Submission of copies of current, unencumbered Registered Nurse license(s).

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- Submission of copies of all advanced practice nursing certification and/or credentialing/recognition documents for applicants with a master's degree.

- Submission of three (3) professional letters of recommendation supporting the applicant's potential success in the DNP program.

- Submission of a curriculum vitae using the official MU Sinclair School of Nursing format which documents educational preparation, work experience, leadership and professional organization activities, and scholarly endeavors such as publications, presentations, research, honors and awards.

- Submission of a three- to five-page essay describing your professional goals and how participation in the DNP program will enhance these goals.

- Completion of a satisfactory interview with School of Nursing faculty. The interview will be arranged after preliminary review of academic credentials and application materials. The match of applicants' educational goals with faculty programs of practice is an important factor that is assessed in the interview.

Courses

See Nursing (NURSE) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION.

Nutrition and Exercise Physiology: Exercise Physiology Graduate Programs

Contact Information

Department of Nutrition and Exercise Physiology
Twila Stokes (StokesT@missouri.edu)
106 McKee
573-882-4136
http://ns.missouri.edu/exercise.html

About the Program

The goal of the Exercise Physiology program is to develop new knowledge through research in the areas of exercise training, exercise metabolism, bone metabolism, body composition, weight management, and fitness. The mission of the Exercise Physiology Graduate Program is to train graduate students to provide leadership in educational, medical, community, and research settings. The graduate program is housed in the Dept. of Nutrition and Exercise Physiology and administered by the College of Human Environmental Sciences, the College of Agriculture, Food and Natural Resources, and the School of Medicine.

Degrees Offered

- Master of Science in Exercise Physiology
- Doctor of Philosophy in Exercise Physiology

Financial Aid from the Program

Assistantships are competitive and can be obtained in research, teaching, and community fitness programs. Numerous scholarships also are available to attract incoming graduate students, including the Life Sciences Fellowship program.

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Affiliated Programs and Faculty

Exercise physiology research and graduate training take place in a number of departments and laboratories at MU. Faculty members in affiliated programs and departments are listed below:

Veterinary Biomedical Sciences
Frank Booth, Doug Bowles, Lane Clarke, Eileen Hasser, M. Harold Laughlin, Ron Terjung, Steve Yang. Contact Doug Bowles for information on the graduate program.

Medical Pharmacology and Physiology
Jamal Ibdah, Kerry McDonald. Contact Ronald Korthuis for information on the graduate program.

Physical Therapy
Marybeth Brown, Erin Dannecker, Stephen Sayers. Contact Stephen Sayers for information about research programs.

Exercise Physiology Faculty

Christopher D. Hardin
professor and chair, nutrition and exercise physiology, professor of medical pharmacology and physiology, PhD, University of Cincinnati. Organization of cell metabolism, glycolysis, mitochondrial function, metabolomics.

Stephen D. Ball
state extension specialist and associate professor of nutrition & exercise physiology, PhD, Arizona State University. Exercise and body composition/weight management, physical activity for youth.

Pamela S. Hinton
associate professor of nutrition & exercise physiology, PhD, University of Wisconsin-Madison. Nutrition and physical activity, energy balance and bone health.

Jill A. Kanaley
professor, nutrition & exercise physiology, PhD, University of Illinois. Exercise, feeding, and the metabolic syndrome.

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R. Scott Rector
assistant professor nutrition and exercise physiology and internal medicine, PhD, University of Missouri. Role of exercise, lifestyle modifications, and pharmacological interventions on obesity, hepatic mitochondrial function, fatty liver disease, insulin resistance, and the metabolic syndrome

Tom R. Thomas
professor of nutrition & exercise physiology, director of graduate studies, PhD, University of Missouri. Exercise physiology, nutrition/ exercise and weight control.

John P. Thyfault
assistant professor, nutrition & exercise physiology and internal medicine; health scientist, VA Medical Center, PhD, University of Kansas. Exercise metabolism, insulin sensitivity, fatty liver disease.

Adjunct Faculty

Frank W. Booth
professor biomedical sciences, PhD, University of Iowa. Inactivity and lifestyle diseases-animal models.

Paul J. Fadel
assistant professor medical pharmacology and physiology, PhD, University of North Texas Health Science Center. Autonomic control of the cardiovascular system during exercise

Thomas P. LaFontaine
adjunct instructor of nutrition & exercise physiology, PhD, University of Missouri. Metabolically-based exercise prescription for cardiac patients.

Dan A. Smith
adjunct instructor of nutrition & exercise physiology, MS, University of Missouri. Cardiac rehabilitation.

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Exercise Physiology Courses

Core Required Courses (23 hours for Master of Science)

- N&EP 7085: Problems (1) - N&EP seminar
- N&EP 7340: Human Nutrition II (biochemistry prerequisite) (3)
- N&EP 7500: Research (3)
- N&EP 7840: CV Health and Fitness (3)
- N&EP 8850: Advanced Exercise Physiology (3)
- ESCP 7610: Quant. Methods I (Regression) (3)
- ESCP 7620: Quant. Methods II (ANOVA) (3)
- N&EP 7500: Research (3)
- N&EP 8850: Advanced Exercise Physiology (3)
- N&EP 8090: Research Thesis (4)

Elective Courses (36 hours total for Master of Science)

- N&EP 7001: Etiology of Obesity (3)
- N&EP 7200: Sports Performance and Conditioning (3)
- N&EP 7810: Sports Conditioning (3)
- N&EP 7970: Sports Nutrition (3)
- N&EP 8310: Nutritional Biochemistry of Lipids (3)
- N&EP 8340: Nutrition in Human Health (3)
- N&EP 8360: Nutritional Biochemistry of Carbohydrates (3)
- N&EP 8870: Exercise Metabolism (3)
- ESCP 7800: Sports Psychology (3)
- VBS 7333: Vet Cell Biology (4)
- VBS 8420: Vet Physiology (fall section) (6)
- VBS 9425: Microvascular Circulatory Function (3)
- VBS 9435: Skeletal Muscle (3)
- Bioch 7270: Biochemistry (3)
- Bioch 7272: Biochemistry (3)
- MPP 7310: Mammalian Cell Function (3)
- MPP 8410: Neural Control (3)
- N&EP 8870: Exercise Metabolism (3)
- MPP 9430: CV Physiology (3)

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Master of Science in Exercise Physiology

Admission Contact Information

Twila Stokes (StokesT@missouri.edu)
106 McKee; Columbia, MO 65211
573-882-4136

Admission Criteria

Deadline for Fall entrance: February 1

- Minimum TOEFL score: 500/173
- Minimum GRE score: 1000 (verbal plus quantitative) and a 3.5 on the analytical
- 3.0 undergraduate GPA (4.0=A)

Required Application Materials

To the Graduate School:
(210 Jesse Hall; Columbia, MO 65211)

- All required Graduate School documents, including online application

To the Exercise Physiology Program:

- 3 letters of recommendation
- GRE scores
- Letter of Purpose indicating academic/research interests and career goals
- Résumé

Financial Aid from the Program

No additional materials are required to be considered for an assistantship.

Plan of Study

The core program consists of 23 hours of course work including a research project (3 hours) and a formal research thesis (4 hours). See the courses section for more information.

Reasonable Rate of Progress

At the end of each year the adviser will evaluate each master's student. Master's students must maintain a 3.0 GPA. In addition, each graduate student must maintain adequate research progress as judged by the adviser and/or graduate committee. Inadequate progress will result in a probationary period of 30 days to 1 semester.

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PhD in Exercise Physiology

Admission Contact Information

Twila Stokes (StokesT@missouri.edu)
106 McKee; Columbia, MO 65211
573-882-4136

Admission Criteria

Deadline for Fall entrance: February 1

- Minimum TOEFL score: 500/173
- Minimum GRE score: 1000 (verbal plus quantitative) and a 4.0 on the analytical
- 3.5 graduate GPA (4.0=A)

Required Application Materials

To the Graduate School:
(210 Jesse Hall; Columbia, MO 65211)

- All required Graduate School documents, including online application

To the Exercise Physiology Program:

- 3 letters of recommendation
- GRE scores
- Letter of Purpose indicating academic/research interests and career goals
- Résumé

Financial Aid from the Program

Assistantships are competitive and can be obtained in research, teaching, and community nutrition and fitness programs. Numerous scholarships also are available to attract incoming graduate students, including the Life Sciences Fellowship program. In addition, outstanding students can apply for F21C fellowships. Other sources (university fellowships and minority recruiting) award assistantships; students also are sponsored by individual faculty members.

Plan of Study

The doctoral program requires a minimum of 80 hours beyond the BS degree. Hours taken on a master's program may be used in the doctoral program at the discretion of the doctoral committee.

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Research requirements include 9 hours of 7500 Research (usually three research projects) and 12 hours of 9090 Dissertation .

NEP 8850: Advanced Exercise Physiology (A or B grade) serves as the qualifying exam.

The plan must include three graduate courses each in exercise physiology, physiology, biochemistry, and statistics.

Each PhD candidate is required to participate in classroom teaching for at least one semester.

Comprehensive Exam
The comprehensive exam process includes writing, defending, and submitting a major grant proposal.

Reasonable Rate of Progress
At the end of each year the adviser will evaluate each doctoral student. Doctoral students must maintain a 3.5 GPA. In addition, each graduate student must maintain adequate research progress as judged by the adviser and/or graduate committee. Inadequate progress will result in a probationary period of 30 days to 1 semester.

END OF PROGRAM DESCRIPTION

Nutrition and Exercise Physiology: Nutritional Sciences Graduate Programs

Contact Information

Twila Stokes (StokesT@missouri.edu)
106 McKee
573-882-4136
http://ns.missouri.edu/

About the Program

The Nutritional Sciences Graduate Program is designed to provide training in laboratory research, seminar preparation and delivery, scientific writing, problem solving and research grant writing. Graduate study in Nutritional Sciences at the University of Missouri is facilitated via interdisciplinary nutrition research through Food for the 21st Century (F21C) and the Life Sciences Center. The graduate program is administered by the Dept. of Nutrition and Exercise Physiology in association with the College of Human Environmental Sciences, the College of Agriculture, Food and Natural Resources, and the School of Medicine.

Degrees Offered

- Master of Science in Nutritional Sciences
- PhD in Nutritional Sciences

Areas of Research

Research opportunities include a broad range of topics related to the study of nutrition, including human metabolic syndrome and obesity, human nutrition, whole-animal models, cultured-cell models, radioisotope tracer methodology, lipid metabolism, receptor methodology. There is particular strength in nutrition and lifestyle diseases, nutritional biochemistry, phytonutrients, and lipids.

Research Facilities

State-of-the-art facilities foster collaborative research in Depts. of Biochemistry, Food Sciences, Nutrition & Exercise Physiology, and

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MU's Life Sciences Center. Graduate students in Nutritional Sciences have numerous opportunities to interact with students and faculty in other departments.

Financial Aid from the Program
Assistantships are competitive and can be obtained in research, teaching, and community nutrition and fitness programs. Numerous scholarships also are available to attract incoming graduate students, including the Life Sciences Fellowship program.

Nutritional Sciences Faculty

Stephen D. Ball
state nutrition specialist and associate professor nutrition & exercise physiology, PhD, Arizona State University. Body composition, obesity, and bone health.

Jo Britt-Rankin
state nutrition specialist/administrative coordinator, family nutrition education programs, associate dean of Human Environmental Sciences, PhD, University of Missouri. Eating disorders, awareness and prevention, nutritional needs of the young athlete, supplement use among athletes, and food safety.

Dale E. Brigham
state nutrition and fitness extension specialist, PhD, Pennsylvania State University. Community-based nutrition and physical activity interventions.

Sara E. Gable
state extension specialist and associate professor nutrition and exercise physiology, PhD, Pennsylvania State University. Family lifestyle practices and health outcomes.

Christopher D. Hardin
professor and chair, nutrition & exercise physiology/professor of medical pharmacology and physiology, PhD, University of Cincinnati. Organization of cell metabolism, glycolysis, mitochondrial function, metabolomics.

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Pamela S. Hinton
associate professor of nutrition & exercise physiology, PhD, University of Wisconsin-Madison. Bone metabolism, physical activity and women's health.

Jill A. Kanaley
professor, nutrition & exercise physiology, PhD, University of Illinois. Exercise, obesity, and feeding.

Heather J. Leidy
assistant professor nutrition & exercise physiology, PhD. Pennsylvania State University. Food composition and metabolic health in adolescents.

James W. Perfield II
assistant professor, nutrition & exercise physiology and food science, PhD, Cornell University. Impact of nutrition and adipose tissue metabolism on the physiology of metabolic disease with an emphasis on obesity and diabetes.

Catherine A. Peterson
associate professor, nutrition & exercise physiology, PhD, University of Illinois at Urbana-Champaign. Nutritional influences on bone throughout childhood and reproductive years.

Michael J. Petris
associate professor of biochemistry/nutrition & exercise physiology, PhD, University of Melbourne, Australia. Regulation of metal transporters in mammalian cell models with a focus on copper.

Tom R. Thomas
professor, nutrition & exercise physiology, director of graduate studies, PhD, University of Missouri. Effects of exercise on the metabolic syndrome and weight management.

John P. Thyfault
assistant professor, nutrition & exercise physiology and internal medicine, PhD, University of Kansas. Effects of exercise on insulin resistance and insulin signaling pathway.

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Cuihua Zhang
associate professor, nutrition & exercise physiology and medical pharmacology & physiology, MD, Jin Zhou Medical College, PhD Chinese Academy of Medical Science and Peking Union Medical College. Endothelium and microvascular function.

Adjunct Faculty

Laura S. Hillman
professor of child health, MD, Yale University. Calcium metabolism in premature infants, children with chronic diseases, and pregnant/lactating women.

Kevin L. Fritsche
professor of animal sciences and molecular microbiology & immunology, PhD, University of Illinois at Urbana-Champaign. Effect of dietary fats, particularly omega-3 fatty acids, on inflammation, immune function and infectious disease resistance.

Jamal Ibdah
professor, internal medicine and medical pharmacology & physiology. MD, University of Jordan, PhD, Medical College of Pennsylvania. Role of genetic and life style modifications in development of nonalcoholic fatty liver disease.

Grace Y. Sun
professor of biochemistry, PhD, Oregon State University. Effects of phytochemicals and phytonutrients on inflammatory and oxidative pathways in neurodegenerative diseases including Alzheimer's disease and stroke.

Gary A. Weisman
professor of biochemistry, PhD, University of Nebraska-Lincoln. Role of nucleotide receptors in the regulation of cardiovascular, neuronal and neoplastic cell functions.

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Application and Admissions Information

Admission Contact Information

Twila Stokes (StokesT@missouri.edu)
106 McKee; Columbia, MO 65211
573-882-4136

Admission Criteria

Application deadline for Fall admission: February 1

- Minimum TOEFL score: 600/250 (paper/computer)
- Minimum GRE score: 1000 on two parts and 3.5 on analytical writing
- Minimum GPA: 3.0 in science and math classes

Prerequisites: Entering students are expected to have undergraduate training in chemistry and biology, a two semester course in biochemistry, and an upper-level nutrition course. Some prerequisites can be met during the first year of graduate study.

Required Application Materials

To the Office of the Graduate School:
(210 Jesse Hall; Columbia, MO 65211)

- All required Graduate School documents, including online application.

To the Program (go there for details):

- Statement of Research Interests and Professional Goals (if not uploaded to the online Graduate School application)
- 3 Letters of Recommendation
- GRE scores
- Résumé

Master of Science in Nutritional Sciences

Admission

See Application and Admission information for Nutritional Sciences above. Entrance requirements are the same for the MS and PhD.

Degree Requirements

The Master of Science degree is awarded in part for the completion of a thesis. The minimum department course requirements for the Master of

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Science degree are:

- 6 hours graduate biochemistry (i.e., Biochemistry 7270 and 7272)
- N&EP 8310 - Nutritional Biochemistry of Lipids
- N&EP 8340 - Nutrition in Human Health
- N&EP 7001 - Etiology of Obesity
- N&EP 7085 - Problems (2 semesters N&EP seminar)
- Graduate level course in statistics

A total of 30 hours of credit are required, of which 15 credits must be at the 8000 level. Other requirements include a thesis based upon original research, a minimum of 4 hours of 8090 Research, an oral examination and a public seminar based on thesis material.

Reasonable Rate of Progress

At the end of each year the adviser will evaluate each master's student. Each student must maintain a 3.0 GPA. In addition, each graduate student must maintain adequate research progress as judged by the adviser and/or graduate committee. Inadequate progress will result in a probationary period of 30 days to 1 semester.

Length of Study Policy

A student is expected to complete an MS degree within a 24-month period. Enrollment in the program will be terminated if the requirements for an MS are not completed within four years.

PhD in Nutritional Sciences

Admission

Prerequisites: See Application and Admission information for Nutritional Sciences above. Entrance requirements are the same for the MS and PhD.

Degree Requirements

Qualifying Exam

Students take and must achieve at least a B grade on a special final exam offered in 8340 Nutrition in Human Health.

Requirements for the PhD degree in nutritional sciences include a mastery of the broad fundamentals of metabolic integration, lipid and carbohydrate biochemistry as well as the demonstrated ability to

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conduct independent, innovative research, including a minimum of 12 hours of 9090 Research (Dissertation).

Required Courses:

- N&EP 8310 - Nutritional Biochemistry of Lipids
- N&EP 8340 - Nutrition in Human Health
- N&EP 7001 - Etiology of Obesity
- Two additional Nutrition courses including MPP 9431 - Control of Energy Metabolism
- 9 hours of graduate course work in emphasis area
- 8085 Problems (4 semesters N&EP seminar)
- 3 graduate level courses in statistics

Each PhD candidate is required to participate in classroom teaching for at least one semester.

Annual Review/Rate of Progress

Annually, the student's faculty adviser and the student's faculty committee are each asked to indicate in writing whether or not the student is making satisfactory progress. Inadequate progress will result in a probationary period of 30 days to 1 semester.

Comprehensive Exam

The comprehensive exam process includes writing, defending, and submitting a major grant proposal.

Length of Study Policy

A graduate student's association with the program will be terminated if the requirements for a PhD are not completed within five years from completion of an MS, or within seven years from entry into the program if the student does not have an MS degree.

Courses

See Nutritional Sciences (NUTR S) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION.

Occupational Therapy: Master of Occupational Therapy

Contact Information

School of Health Professions
Department of Occupational Therapy and Occupational Science
425 Lewis Hall, Columbia, MO 65211-4240
573-882-3988; FAX 573-884-2610
http://shp.missouri.edu/ot/

About the MOT Program

The School of Health Professions offers an entry level master's degree in occupational therapy. Students apply to the Department of Occupational Therapy and Occupational Science as an undergraduate, receive a Bachelor of Occupational Science (BOS) and continue on to graduate level courses. These graduate courses are only offered to students enrolled in the program. The degree program is approved to meet accreditation requirements requiring a graduate degree. Contact the Department of Occupational Therapy and Occupational Science for more information regarding the degree.

Degree Offered

- Master of Occupational Therapy (MOT)

Accreditation & Certification

The Department of Occupational Therapy and Occupational Science is accredited by the Accreditation Council for Occupational Therapy (ACOTE) of the American Occupational Therapy Association, 4720 Montgomery Lane, Bethesda, MD, 20814-3425, 301-652-2682.

Graduates are eligible to sit for the national certification examination administered by the National Board for Certification in Occupational Therapy (NBCOT), Inc. 12 South Summit Ave., Suite 100, Gaithersburg, MD 20877-4150, telephone (301)990-7979; Fax (301) 869-8492.

Financial Aid from the Program

Check the School of Health Professions' Web site at http://shp.missouri.edu for scholarship information.

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Occupational Therapy and Occupational Science Department Faculty

Guy L. McCormack
PhD, OTR/L, FAOTA, clinical professor and department chair.
Research interests: neuroscience.

Crystal Gateley
MA, OTR/L, clinical assistant professor.
Research interests: health literacy.

Meena Iyer
PhD, OTR/L, assistant professor.
Research interests: human neuroplasticity in health and disease.

Lea Ann Lowery
M.Ed., OTR/L, clinical assistant professor.
Research interests: pediatrics.

Giulianne Krug
MA, OTR/L, clinical assistant professor.
Research interests: physical disability and cognitive rehabilitation.

Enid Schatz
PhD, assistant professor.
Research interests: women's health and demographics.

Diane Smith
PhD, OTR/L, FAOTA, assistant professor and associate chair, director of graduate studies.
Research interests: Public policy, health literacy.

Dovie Weston
M.Ed., OTR/L, clinical instructor.
Academic fieldwork coordinator.

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Master of Occupational Therapy Application and Admission Information

Admission Contact Information

Leanna Garrison, Department Administrator
405 Lewis Hall; Columbia, MO 65211
573-884-2113

Admission Criteria

Application Deadline for Summer entrance: January 15

- Minimum TOEFL score: 500/173
- Minimum MAT score: none set
- Undergraduate GPA: 3.0 or higher (4.0=A)
- 30 hours of occupational therapy observation

Required Application Materials

***Note*: Submit all materials to the OT Department (DO NOT apply to Graduate School)**

Go to http://shp.missouri.edu/ot/ for ALL application forms (Available Oct 1-Dec 31)

- Departmental application
- Observation Forms
- 3 letters of recommendation
- Personal Statement
- Activities
- Interview

Courses

See Occupational Therapy (OCTHR) graduate courses in the myZou online system.

Parks, Recreation & Tourism Degree Program

Contact Information

School of Natural Resources
105 Anheuser-Busch Natural Resources Building
573-882-7086
http://www.snr.missouri.edu/prt/

About Parks, Recreation & Tourism

Since virtually everyone participates in some form of leisure, the primary benefit of Parks, Recreation and Tourism (PRT) is to improve the quality of life. The unique interaction of people, places, and activities form the basis of recreation and tourism management – among the world's largest industries. Students learn how to design, promote and evaluate leisure opportunities for diverse audiences.

Degree Offered

- Master of Science

Career Preparation

The purpose of the graduate degree is to prepare the candidate for decision-making positions beyond the entry level practitioner. The degree aims to blend the practice of leisure service delivery with a commitment to research and scholarship as the foundation of professional excellence.

Plan of Study

The master's degree can be successfully attained via two options — thesis option or non-thesis option.

Thesis Option

The thesis option requires a minimum of 30 credit hours, which includes: a minimum of 15 hours at the 8000 level; a minimum of 12 hours of theory-based contact courses within the major; and an independent scholarship effort (thesis).

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Non-Thesis Option
The non-thesis option requires a minimum of 39 credit hours, which includes: a minimum of 15 hours at the 8000 level; a minimum of 12 hours of theory-based contact courses within the major; and an independent scholarship (project).

Financial Aid from the Program
This program requires a statement of purpose and an application form to be considered for internal assistantships, fellowships or other funding packages. Check the website or contact the director of graduate studies for more details.

Parks, Recreation and Tourism Faculty

David R. Vaught
chair, director of graduate studies, PhD, University of Missouri.

J. Mark Morgan
associate professor, PhD, Texas A&M University.

Carla Barbieri
assistant professor, PhD, Michigan State University.

Sonja Wilhelm-Stanis
assistant professor, PhD, University of Minnesota.

Gerald L. Hitzhusen
associate professor, MS, University of Missouri.

Jennifer R. Upah
director of internships, MS, University of Houston.

Application and Admission Information

Admission Contact Information
David Vaught
Parks, Recreation & Tourism admission Web page:
http://www.snr.missouri.edu/prt/academics/graduate-program.php

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Admission Criteria

- Fall deadline: Rolling
- Minimum GRE score: not set
- Minimum GPA: 3.0 in last 60 hours
- Minimum TOEFL score: 500/173/61 (paper/computer/IBT)
- To be accepted as a candidate for the degree, an applicant must possess an undergraduate degree and academic performance that displays a breadth and depth of university education in social, behavioral, mathematical and natural science and major-specific coursework.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the PRT Program:

- Statement of purpose
- Résumé
- College transcripts
- Three letters of recommendation (use provided form)
- GRE scores
- TOEFL scores (for international applicants)

Courses

See Parks, Recreation and Tourism (P R TR) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Pathobiology Area Program Doctorate (PhD)

Contact Information

College of Veterinary Medicine
201 Connaway Hall
573-884-2444
http://www.cvm.missouri.edu/vpbio/

About the Program

The PhD Area Program in Pathobiology is university-wide and staffed by faculty from the College of Veterinary Medicine (Veterinary Pathobiology, Veterinary Medicine and Surgery), School of Medicine (Pathology and Anatomical Science, Molecular Microbiology and Immunology, Biochemistry), College of Arts and Science (Biological Sciences), and College of Agriculture, Food and Natural Resources (Biochemistry, Animal Sciences).

Degree Offered

- Doctorate in Pathobiology

Note: The master of science program in biomedical sciences, with an emphasis in veterinary pathobiology, is listed separately in this catalog but shares the pathobiology doctoral courses and faculty list.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. In this program, various stipends are available, including teaching and research assistantships and postdoctoral fellowships. Check the program Web site or ask the program contact for details.

Career Preparation

Graduate training relates to the major departmental thrust — application of advanced biotechnology to solving today's most perplexing agricultural, biomedical and companion animal questions. The faculty in

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the Pathobiology Area Program consists of scientists engaged in a wide variety of research programs supported by grants and contracts from government, foundations and private industry.

The Pathobiology Program is designed to prepare students for advanced professional careers in universities and colleges, research institutes, public health, hospital laboratories and industrial research. The broad scope of the program and its organization across departments creates an atmosphere for meaningful interdisciplinary dialogue between graduate students and faculty. Furthermore, it increases availability of advisers, committee members, facilities and equipment for doctoral candidates.

A PhD candidate may choose a plan of research to take advantage of a wide range of interests and specialties in pathology and microbiology.

Facilities and Resources

Facilities are available that are suitable for advanced research in pathology, microbiology and molecular biology. A wide range of equipment for advanced molecular biological procedures is available. BSL-3 biocontainment facilities are available.

Areas of Study

Toxicology, environmental toxicology, comparative medicine, epidemiology and pathogenesis of avian and mammalian diseases (companion animal, food-producing animal and spontaneous disease of laboratory animals), molecular biology, ultrastructure, parasitology, DNA and RNA analysis, biomechanics, physiology, pathophysiology, oncology, bioinfomatics, diagnostic anatomic pathology, veterinary neuropathology, pathology of infectious disease, quantitative pathology, molecular genetics, domestic animal genomics, bacteriology/mycology, antimicrobial resistance.

Pathobiology Area Program Faculty

Yuksel Agca
PhD, assistant professor of Veterinary Pathobiology.

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Kristina Aldridge
PhD, assistant professor of Pathology & Anatomical Science.

Gary K. Allen
DVM, PhD, UM Vice President for Information Technology

Deborah Anderson
PhD, assistant professor of Veterinary Pathobiology.

Douglas Anthony
MD, PhD, professor and Chair of Pathology & Anatomical Sciences

Ulus Atasoy
MD, PhD, assistant professor of Surgery and Molecular Microbiology & Immunology.

Brenda T. Beerntsen
PhD, associate professor of Veterinary Pathobiology.

Linda Berent
DVM, PhD, clinical assistant professor of Veterinary Pathobiology.

Cynthia Besch-Williford
DVM, PhD, associate professor of Veterinary Pathobiology.

Charles R. Brown
PhD, associate professor of Veterinary Pathobiology.

Elizabeth Bryda
PhD, associate professor of Veterinary Pathobiology.

Michael Calcutt
PhD, associate professor of Veterinary Pathobiology.

Charles Caldwell
PhD, professor of Pathology & Anatomical Science - Anatomical Pathology.

C. Andrew Carson
VMD, PhD, professor of Veterinary Pathobiology.

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Stan Casteel
DVM, PhD, associate professor of Veterinary Pathobiology.

Leah Cohn
DVM, PhD, associate professor of Veterinary Medicine & Surgery.

James Cook
DVM, PhD, professor of Veterinary Small Animal Medicine & Orthopedic Surgery.

John Critser
PhD, Gilbreath McLorn professor of Veterinary Pathobiology.

Mark Daniels
PhD, assistant professor of Molecular Microbiology & Immunology.

John Dodam
DVM, PhD, associate professor of Biomedical Sciences and chair of Veterinary Medicine & Surgery.

Tim Evans
DVM, PhD, assistant professor of Veterinary Pathobiology.

William Fales
PhD, professor of Veterinary Pathobiology.

Derek Fox,
DVM, PhD, assistant professor of Veterinary Medicine & Surgery.

Craig Franklin
DVM, PhD, associate professor of Veterinary Pathobiology.

ZeZong Gu
PhD, assistant professor of Pathology & Anatomical Sciences.

Daniel Hassett
PhD, assistant professor of Veterinary Pathobiology.

Carolyn Henry
DVM, PhD, director of the Scott Program, professor of Veterinary Oncology.

continued on next page

Tim Hoffman
PhD, associate professor of Medicine-Hematology & Oncology.

Casey Holliday
PhD, assistant professor of Pathology & Anatomical Sciences, Anatomy.

Gary S. Johnson
DVM, PhD, associate professor of Veterinary Pathobiology.

Gayle C. Johnson
DVM, PhD, professor of Veterinary Pathobiology.

Martin Katz
PhD, professor of Opthalmology.

Keiichi Kuroki
DVM, PhD, assistant professor of Veterinary Pathobiology.

Mike Lewis
PhD, associate professor of Veterinary Medicine & Surgery.

Robert Livingston
DVM, PhD, clinical associate professor of Veterinary Pathobiology.

Christian Lorson
PhD, associate professor of Veterinary Pathobiology.

Dennis Lubahn
PhD, professor of Biochemistry.

John Middleton
DVM, PhD, associate professor of Food Animal Medicine.

Cecil Moore
DVM, PhD, professor of Ophthalmology.

Kristina Narfstrom
DVM, PhD, Ruth M. Kraeuchi Endowed Professor of Veterinary Opthalmology.

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Dennis O'Brien
DVM, PhD, professor of Veterinary Medicine & Surgery.

Charlotte Phillips
PhD, associate professor of Biochemistry.

Matthew Ravosa
PhD, professor of Pathology & Anatomical Science.

Bimal Ray
PhD, professor of Veterinary Pathobiology.

Chada Reddy
PhD, associate professor of Veterinary Biomedical Sciences & Pharmacology.

Tom Reilly
PhD, assistant professor of Veterinary Pathobiology.

Lela Riley
PhD, professor of Veterinary Pathobiology.

R. Michael Roberts
PhD, professor Animal Science & Biochemistry.

Heidi Schatten,
PhD, professor of Veterinary Pathobiology.

Susan Schommer
PhD, assistant professor of Veterinary Pathobiology.

Daniel Smith
PhD, associate professor of Pathology & Anatomical Science-Anatomical Pathology.

George P. Smith
PhD, professor of Biological Sciences.

M. Sharon Stack
PhD, professor of Pathology & Anatomical Science.

continued on next page

George Stewart
PhD, McKee Endowed Professor of Microbial Pathogenesis & chair of Veterinary Pathobiology.

R. William Stich
PhD, associate professor of Veterinary Pathobiology.

Catherine Vogelweid
DVM, PhD, clinical associate professor, director of graduate studies-Veterinary Pathobiology.

Carol V. Ward
PhD, associate professor of Pathology & Anatomical Science.

Charles Wiedmeyer
DVM, PhD, assistant professor of Veterinary Pathobiology.

Guoquan Zhang
PhD, assistant professor of Veterinary Pathobiology.

Admission Contact Information

Anne Chegwidden
201 Connaway Hall; Columbia, MO 65211
573-884-2444

Admission Criteria

Fall deadline: n/a

- Minimum TOEFL score (when appropriate): 500/61 (Paper/Internet)
- GRE Scores
- Undergraduate GPA: 3.0
- Designated faculty mentor

Professional students with a DVM degree may be eligible to waive the GRE. A qualifying examination administered by the doctoral committee may be required for admittance.

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Required Application Materials

To the Graduate School:

All required Graduate School documents

To the Pathobiology Area PhD Program:

- 3 letters of recommendation (can be submitted through the Graduate School's online application as well)
- GRE scores

Plan of Study

Most of the student's program and examining committees shall be from the area faculty. Under the guidance of a program committee, a course of study is individually designed to fit each student's academic background, experience and objectives. Courses normally suggested for completion include statistics, biochemistry, molecular biology, advanced microbiology and advanced pathology. Courses may be chosen from one or more departments, as decided by the program committee, but shall constitute a definite plan of education for research or scholarly investigation in some particular aspect of microbiology or pathology. The final examination covers mainly the dissertation.

Degree Requirements

Research is the foundation of graduate and postdoctoral study and students within the Pathobiology Area Program can expect to spend 75 percent of their time engaged in research activities. The PhD degree requires 72 credit hours of work including a minimum of 15 credits of upper-level graduate course work inclusive of research credits. The student must pass a written and oral comprehensive examination in the area of study and write, present and defend a dissertation that embodies the results of original and significant investigation by the candidate.

Courses

See Veterinary Pathobiology (V PBIO) graduate courses in the myZou online system.

Pathology and Anatomical Sciences

School of Medicine
M263 Medical Sciences Building
(573) 882-1201
http://pathology-anatomy.missouri.edu

About Pathology and Anatomical Sciences

The Department of Pathology and Anatomical Sciences in the School of Medicine, along with the department of Veterinary Pathobiology in the College of Veterinary Medicine, offers a PhD degree through the Pathobiology Area Program. Faculty also participate in other doctoral programs such as the Integrative Neuroscience Program, Genetics Area Program, and Molecular Pharmacology and Physiology. The MS degree is designed primarily to prepare students for teaching in medical technology, supervisory roles in clinical and basic-science laboratories, and to offer greater in-depth study in pathology and anatomical sciences concurrent with studies leading to the MD degree.

Degrees Offered

- Doctorate in Pathology and Anatomical Sciences
- Master of Science in Pathology and Anatomical Sciences

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Pathology and Anatomical Faculty

Adelstein, Edward H.
associate professor, DVM, MD, University of Missouri.

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Aldridge, Kristina J.
assistant professor, PhD, John Hopkins University.

Anthony, Douglas C.
chair, professor, MD, PhD, Duke University.

Arthur, Gerald L.
assistant research professor, MD, University of Chicago.

Bennett, Lynda B.
assistant research professor, PhD, Imperial College of London.

Caldwell, Charles W.
director of Ellis Fischel Cancer Center, professor, MD, PhD, University of Missouri.

Cui, Jiankun
assistant research professor, MD, University ofTianjin Medical School, China.

Davis, George E.
professor, MD, PhD, University of California-San Diego.

Diaz-Arias, Alberto A.
associate professor, MD, University of Missouri.

Esebua, Magda
assistant professor, MD,Tbilisi State Medical University,Tbilisi, Republic of Georgia.

Frazier, Shellaine
assistant clinical professor, DO, Kirksville College of Osteopathic .Medicine.

Glinskii, Vladislav
assistant professor, MD, Medical Institute, Chernovtsky, Ukraine.

Goldschmidt, Ariel
deputy medical examiner, MD, Jefferson Medical College.

continued on next page

Gu, Zezong
assistant professor, MD, Tianjin Medical School, China, PhD, University of Texas.

Havey, Ann D.
associate clinical professor, MD, Southern Illinois University.

Hogg, Russell T.
lecturer, PhD, City University of New York.

Holliday, Casey
assistant professor, PhD, Ohio University.

Ingram, Ellis A.
senior associate dean, associate professor, MD, University of Michigan, MHA, University of Missouri.

Jones, Jack
clinical instructor, MD, University of Tennessee.

Krause, William J.
professor, PhD, University of Missouri.

Little, Randi R.
associate research professor, PhD, Florida State University.

Loy, Timothy S.
associate professor, MD, Southern Illinois University.

McAfee, Robert K.
assistant teaching professor, PhD, Northern Illinois University.

Miles, Judith H.
professor, MD, University of Missouri, PhD, University of Indiana.

Miller, Douglas C.
clinical professor, MD, PhD, University of Miami.

Mitra, Ranadhir
associate professor, PhD, University of Missouri.

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Peburn, Tara
lecturer, PhD City University of New York.

Petrides, Marian
clinical professor, MD, Dartmouth University.

Pittman, David L.
vice-chair of clinical affairs, MD, University of Nebraska.

Ravosa, Matthew J.
director of graduate studies, professor, PhD, Northwestern University.

Shin, Dmitriy
clinical instructor, MS, Moscow State Academy of Computer Science and Engineering, Russia.

Spollen, Linda E.
associate professor emerita, MD, University of Kansas.

Stack, M. Sharon
vice-chair for research, professor, PhD, University of Louisville.

Stacy, Carl S.
assistant professor, MD, University of Oklahoma.

Sun, Grace Y.
professor, PhD, Oregon State University.

Wang, Michael X.
assistant professor, MD, Lanzhou Medical College, China, PhD, University of Texas.

Ward, Carol V.
professor, PhD, John Hopkins University.

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Admission

Admission Criteria

Deadline for Fall entrance: Inquire with Director of Graduate Studies

Required Application Materials

To the Graduate School:
All required Graduate School documents

To the Pathology and Anatomical Program

Master of Science in Pathology and Anatomical Sciences

The MS degree is designed primarily to prepare students for teaching in medical technology, supervisory roles in clinical and basic-science laboratories, and to offer greater in-depth study in pathology and anatomical sciences (potentially concurrent with studies leading to the MD degree).

Admission to candidacy in the masters program is limited to those who hold at least a baccalaureate degree from an accredited college or university.

Preference will be given to students with a college GPA of 3.5 or higher, GRE scores (verbal + analytical) over 1250, and strong letters of recommendation.

Each candidate for the master's degree is required to complete a minimum of 30 semester hours at the 8000 or 9000 level, maintenance of a B or better GPA in graduate course work with no more than 12 hours of research, problems or special investigations.

Candidates also must satisfactorily complete a thesis. A candidate is expected to demonstrate knowledge of clinical and/or research techniques and to defend the thesis.

Faculty members advise students in the preparation of a program of study.

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Required courses and those of special interest should complement the student's academic background and career objectives.

Interdisciplinary Area PhD in Pathobiology Area Program

Interdisciplinary area of pathobiology: The Department of Pathology and Anatomical Sciences in the School of Medicine, along with the department of Veterinary Pathobiology in the College of Veterinary Medicine, offers a PhD degree through the Pathobiology Area Program.

Prospective students must have a solid background in the life sciences, with advanced level experience in evolutionary biology, molecular biology, cell biology and/or biology.

Prior courses in anatomy, evolutionary biology, genetics, cell biology, developmental biology, neurobiology, chemistry and/or physics are highly recommended.

Preference will be given to students with a college GPA of 3.5 or higher, GRE scores (verbal + analytical) over 1250, and three strong letters of recommendation.

Research experience at the undergraduate and/or masters level is also desirable.

Students are required to complete the minimum doctoral requirements of the Graduate School. These include 72 semester hours beyond the baccalaureate degree, including research and readings credits, to be approved by the doctoral advisor. Up to 30 hours of post-baccalaureate credit from an accredited institution may be transferred toward the doctoral degree.

Resources for research in integrative anatomy, cancer biology, evolution, genetics, pathobiology and neurobiology include standard and special-use equipment in the departmental laboratories.

Faculty and staff members provide guidance and practical supervision in basic-science, clinical, translational and experimental research.

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Courses

See Pathology and Anatomical Sciences (PTH AS) graduate courses in the myZou online system.

Contact Information

Dr. Matthew J. Ravosa, Professor and Director of Graduate Studies
M303 Medical Sciences Building, MU School of Medicine
573-884-7303 (phone)
573-884-4612 (fax)
ravosam@missouri.edu

Personal Financial Planning Graduate Programs

Contact Information

College of Human Environmental Sciences
239 Stanley Hall
573-882-7836
http://pfp.missouri.edu/

About the Program

Individuals and families today bear an ever-growing responsibility for achieving and sustaining financial and economic success across their life span. Never has there been a greater need for well-trained professionals who can help individuals and families make informed and effective financial and economic decisions. In addition, research that helps to evaluate and recommend public policies that influence the economic opportunities and futures of individuals and families is in high demand.

Graduate course work in personal financial planning at the University of Missouri analyzes household and consumer economic conditions and behavior, evaluating the interrelationships between households and markets with a focus on improving social policy. Students' programs are designed to develop professional competencies and interests. A resident doctoral and two master's programs are available. Online graduate offerings may be viewed at http://pfp.missouri.edu/graduate_distance.html.

Degrees Offered

Students interested in careers as financial planners have several degree options which meet the Certified Financial Planner Board of Standards Inc.'s education requirement. Degrees registered with the Certified Financial Planner Board of Standards Inc. include: a graduate certificate in Personal Financial Planning; an applied master's degree; and a joint JD/MS in cooperation with the School of Law. Financial planning course work could also be completed as a doctoral program that is registered with the Certified Financial Planner Board of Standards Inc.

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Financial Aid
If you wish to be considered for internal assistantships, fellowships or other funding packages, check the program Web site or contact the director of graduates studies, Deanna Sharpe (sharped@missouri.edu) for details.

Faculty Areas of Study
Students have opportunity to work closely with department faculty who are widely recognized professionals in various aspects of personal financial planning and consumer and family economics. Faculty research interests cover a broad spectrum of financial and economic issues, including, but not limited to college savings and affordability, retirement savings, health care financing, risk analysis, labor supply and household production choices, consumer behavior, consumer expenditure patterns, consumer credit use, insurance demand, and low-income financial literacy.

Personal Financial Planning Faculty

Robert O. Weagley
PhD, CFP®, associate professor and chair, Cornell University. Research interests: educational financing, labor market participation, consumer expenditures.

Starla L. Green-Ivey
PhD, teaching assistant professor, University of Missouri.

Brenda Procter
MS, associate state consumer and family economics specialist, University of Missouri. Research interests: poverty, consumer protection.

Deanna L. Sharpe
PhD, CFP®, CRPC®, CRPS®, associate professor, Iowa State University. Research interests: retirement planning, consumer expenditures, health care financing, economic policy analysis .

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Rui Yao
PhD, CFP®, assistant professor, The Ohio State University. Research interests: patterns of household financial risk tolerance, financial ratios, portfolio allocation, debt management, and retirement preparation.

Tansel Yilmazer
PhD, assistant professor, University of Texas at Austin. Research interests: household economics, family finances, small business finances, financial institutions and services.

Application and Admission Information for the MS, PhD

Admission Criteria

- Fall deadline: February 1
- Spring deadline: October 1
- Minimum TOEFL score for ESL students: 550/213 (paper/computer)
- Minimum GPA: 3.0 in last 60 hours

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Program:

- 3 letters of recommendation
- GRE scores (or GMAT for Applied MS in Personal Financial Planning)
- Official transcripts
- Statement of Purpose
- Résumé

Degree and Certificate Information

Doctoral Program

The doctoral program is designed to develop skill in the evaluation and generation of research that advances the disciplines engaged in Personal Financial Planning, such as Personal Finance, Family Economics, Consumer Economics, Corporate Finance, Law, among others. This program prepares students for careers in university research and teaching, government, Extension, or public policy evaluation.

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Master of Science (thesis option)
The thesis-based Master of Science program is a program requiring a minimum of 30 hours. Coursework focuses on critical analysis of the interaction of the household sector with the markets for labor, consumer goods and financial products. Emphasis is placed on developing analytical skills. Coursework culminates in a master's thesis.

Applied Master of Science (non-thesis option)
The Applied Master of Science is a 36 hour program. Coursework is designed to complete the education required to sit for the national CERTIFIED FINANCIAL PLANNER™ exam and to broaden the practitioner's understanding of the various factors that can affect and enhance a client's financial security and economic well-being. Coursework culminates in a creative component, providing students an opportunity to integrate theory and practice in exploring or resolving issues related to personal financial planning. (This degree is also available via distance education through the Great Plains IDEA group. Note, the Great Plains IDEA degree option will require 42 hours to complete. Please see http://pfp.missouri.edu/graduate_distance.html for more information.)

Graduate Certificate in Personal Financial Planning
The Personal Financial Planning Certificate is an 18 hour non-degree, post-baccalaureate program designed to prepare students to sit for the rigorous, national CERTIFIED FINANCIAL PLANNER™ exam. Program applicants must have completed a bachelor's degree. Completing the Personal Financial Planning Certificate satisfies the Certified Financial Planner Board of Standard's education requirement, which is one of four requirements leading to approval to use the CFP® designation. The other three requirements are passing the national exam, meeting an experience requirement and agreeing to adhere to the CFP® code of ethics. The CERTIFIED FINANCIAL PLANNER™ designation is widely recognized as the premier professional designation in the personal financial management services industry. (This certificate is also available via distance education through the Great Plains IDEA group. Please see http://pfp.missouri.edu/graduate_distance.html for more information.)

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Courses Required for the Applied Master's Degree and the Graduate Certificate in Personal Financial Planning:

- FINPLN 7000 Problems: Introduction to Personal Financial Management
- FINPLN 7382 Financial Planning: Risk Management
- FINPLN 7383 Financial Planning: Investment Management
- FINPLN 7187 Tax Planning
- FINPLN 7386 Financial Planning: Employee Benefits and Retirement Planning
- FINPLN 7393 Financial Planning: Estate and Gift Planning

Elective Courses

Since the Personal Financial Planning Certificate is a registered program under the oversight of a professional organization granting a professional designation, all courses are required. Electives may be taken as part of the Applied Master of Science (non-thesis options), the Master of Science (thesis option) and the doctoral programs.

For More Information

Contact Deanna L. Sharpe, PhD, CFP®, 239C Stanley Hall. Phone: (573) 882-9652 or our administrative assistant at (573) 882-7836. Send an email to Dr. Sharpe at sharped@missouri.edu.

Courses

See PERSONAL FINANCIAL PLANNING (FINPLN) graduate courses in the MyZou online system.

END OF PROGRAM DESCRIPTION

Philosophy Graduate Programs

Contact Information

College of Arts and Science
438 Strickland Hall
573-882-2871
http://philosophy.missouri.edu/

About the Program

The Philosophy Department provides excellent training in both research and teaching. The nationally and internationally renowned faculty have expertise in the core areas of philosophy, with particular strength in epistemology, ethics, philosophy of mind and political philosophy, and also in various specialties; these include philosophy of biology, Asian philosophy, experimental philosophy, and the foundations of decision and game theory. With 16 full time faculty and around 25 graduate students, we offer a supportive community for pursuit of the MA and the PhD, with a broad range of courses, rigorous training, attentive, high-quality advising, the opportunity to develop a professional network through our series of colloquia and conferences, and help in every aspect of job seeking. We give students the advice and support they need to present their work at regional and national conferences, and to publish in professional journals, before they begin to look for jobs. We also give our students extensive training and experience in teaching, including assistantships with award-winning teachers.

Degrees Offered

- Master of Arts in Philosophy
- Doctorate in Philosophy

Professional Development

Presentation of research at professional meetings and publication by graduate students is encouraged. Prominent off-campus philosophers visit the department yearly for talks and symposia. Twice yearly, the Florence G. Kline endowment sponsors an intensive workshop at which papers on a special topic are presented by several leading figures in philosophy.

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Financial Aid from the Program
Fellowships and teaching assistantships are available to qualified students. Applications for fellowships must meet Graduate School deadlines, usually in January. Applications for teaching assistantships must meet the department deadline of January 15.

Philosophy Faculty

Andrew Melnyk
chair, professor, D. Phil, Oxford University. Philosophy of mind, philosophy of psychology, philosophy of science. Office: 439 Strickland Hall, 573-882-1278. melnyka@missouri.edu

Claire Horisk
director of graduate studies, associate professor, PhD, University of North Carolina-Chapel Hill. Philosophy of language, history of analytic philosophy. Office: 437 Strickland Hall, 573-882-4053. horiskc@missouri.edu

André Ariew
associate professor, PhD, University of Arizona. Philosophy of biology, philosophy of science. Office: 434 Strickland Hall, 573-882-2871. ariewa@missouri.edu

Joseph Bien
professor, DTC, University of Paris. Political and social philosophy, Marxism, recent continental philosophy. Office: 414 Strickland Hall, 573-882-3664. bienj@missouri.edu

William Bondeson
Curators' Teaching Professor, PhD, University of Chicago. Ancient philosophy, medical ethics. Office: 109 Lowry Hall, 573-884-3128. bondesonw@missouri.edu

Sara Rachel Chant
assistant professor, PhD, University of Wisconsin-Madison. Metaphysics, philosophy of action, ethics, philosophy of social sciences. Office: 422 Strickland Hall, 573-882-3192. chants@missouri.edu

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Zachary Ernst
associate professor, PhD, University of Wisconsin-Madison. Philosophy of biology, logic, automated reasoning. Office: 424 Strickland Hall, 573-882-2871. ernstz@missouri.edu

Bina Gupta
Curators' Professor, PhD, Southern Illinois University. Indian and comparative philosophy. Office: 418 Strickland Hall, 573-882-3065. guptab@missouri.edu

Robert N. Johnson
professor, PhD, University of North Carolina-Chapel Hill. Ethical theory, history of ethics, modern philosophy. 430 Strickland Hall, 573-884-6210. johnsonrn@missouri.edu

Matthew McGrath
associate professor, PhD, Brown University. Metaphysics, epistemology, philosophy of language. Office: 419 Strickland Hall, 573-882-6546. mcgrathma@missouri.edu

Peter Markie
Curators' Teaching Professor, PhD, University of Massachusetts. Seventeenth century philosophy, ethics, epistemology, philosophy of mind. Office: 409 Strickland Hall, 573-884-6955. markiep@missouri.edu

Philip Robbins
associate professor and director of undergraduate studies, PhD. University of Chicago philosophy of mind, philosophy of language. Office: 426 Strickland Hall, 573-882-2764. robbinsp@missouri.edu

Donald E. Sievert
professor, PhD, University of Iowa. Descartes, twentieth century British philosophy. Office: 432 Strickland Hall, 573-882-3381. sievertd@missouri.edu

Peter Vallentyne
Florence G. Kline Missouri Chair of Philosophy, PhD, University of Pittsburgh. Ethics, social and political philosophy, philosophy of law. Office: 406 Strickland Hall, 573-882-2871. vallentynep@missouri.edu

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Alexander von Schoenborn
associate professor, PhD, Tulane University. Kant, subsequent German philosophy. Office: 431 Strickland Hall, 573-882-3462. vonschoenborna@missouri.edu

Paul Weirich
Curators' Professor, director of graduate admissions, PhD, University of California-Los Angeles. Decision theory, logic, philosophy of science, political philosophy. Office: 415 Strickland Hall, 573-882-6760. weirichp@missouri.edu

Application and Admissions Information

Admission Contact Information

Paul Weirich
College of Arts and Science
Department of Philosophy
415 Strickland Hall
573-882-6760
weirichp@missouri.edu

Admission Criteria

Fall deadline: January 15

- Minimum TOEFL score: The minimum required score is 100 (internet) with a speaking score of at least 23 (internet).

Average GRE scores: 650 Verbal, 700 Quantitative
Average GPA in the major: 3.9

Although we award an MA degree, we only admit students to our PhD program (with the MA obtained in the process). Any unusual circumstances regarding failure to meet the minimum requirements should be called to the attention of the director of graduate admissions.

Eligibility for any graduate work in philosophy requires the equivalent of the following six undergraduate courses in philosophy: formal logic, ethics, ancient philosophy, modern philosophy, epistemology, and metaphysics.

Deficiencies may be made up after the student is enrolled at MU.

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Required Application Materials

To the Graduate School:

- All required Graduate School documents
- 3 letters of recommendation (submission through the online application system strongly preferred, but postal mail submission directly to the department allowed)
- Statement of interest (upload to the online application)
- Writing sample (upload to the online application)

To the Philosophy Program:

- GRE score report (electronic only)
- Departmental application (download this from http://philosophy.missouri.edu/graduate/apply.html and then upload to the online application.

Master of Arts in Philosophy Admission

See Application and Admissions information above. Although we award an MA degree, we only admit students to our PhD program (with the MA obtained in the process).

Master of Arts Degree Requirements

30 semester hours of graduate work, 15 of which must be at the 8000 level. At least 80 percent of the hours submitted for the master's program must be completed with a grade of A or B.

A distribution of graduate courses including a protoseminar for all first year students, one course in the history of philosophy and one course in either ethics, political philosophy, metaphysics, or epistemology.

A thesis or two papers of format and topic appropriate for a refereed paper in a major journal, displaying sustained research and philosophical analysis, and an oral defense of the thesis or papers.

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Doctorate in Philosophy

Admission

See Application and Admissions information above.

Qualifying Exam

Qualification for the PhD program is established by a qualifying examination (typically by superior performance on the MA research requirement).

Graduation Requirements for the PhD

72 hours of course work in philosophy, with at least 42 hours of regular course work.

A distribution of graduate courses including an introductory seminar for all first year students, two advanced courses in logic, two courses in the history of philosophy, and one course in each of ethics, epistemology, and metaphysics.

A written and oral dissertation proposal requirement designed to ensure the student's familiarity with the relevant philosophical literature and ability to analyze philosophical issues. A dissertation and a final oral examination on the dissertation.

Courses

See Philosophy (PHIL) graduate courses in the myZou online system.

END OF PHILOSOPHY PROGRAM DESCRIPTION.

Physical Therapy Degree Program

Contact Information

School of Health Professions
106 Lewis Hall
573-882-7103
573-884-8369 (fax)
mushppt@missouri.edu
http://shp.missouri.edu/pt/

About the Program

Starting in 2007, students who enter the MU Physical Therapy program will complete a Doctor of Physical Therapy (DPT) degree program.

Degree Offered

Doctor of Physical Therapy (DPT)

Careers

The DPT degree is an entry-level clinical degree that prepares the student to enter the field of physical therapy as a general practitioner with a background in musculoskeletal, neuromuscular, cardiovascular/pulmonary and integumentary systems.

Financial Aid from the Program

Students may apply for scholarships and assistantships. Check the program Web site or ask the program contact for availability and details.

Physical Therapy Faculty

Marian Minor
chair, director of research and graduate studies, professor, MSPH, PhD, University of Missouri; PT, University of Kansas. Arthritis, community based exercise programs.

Marilyn Sanford Hargrove
clinical associate professor, PhD, PT, University of Missouri. Orthopedics and geriatrics.

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Karen Wingert
clinical associate professor, DPT, Rocky Mountain University; MA, University of Missouri-Kansas City; PT, University of Missouri. Women's health, clinical medicine/oncology.

Marybeth Brown
Health South Professor, MS, PhD, University of Southern California; BSPT, Russell Sage College. Geriatrics, muscle physiology.

Carmen Abbott
clinical associate professor, MA, PhD, PT, University of Missouri. Therapeutic exercise, physical agents.

Kyle Gibson
director of curriculum and instruction, clinical assistant professor, MS, PhD, University of Missouri; PT, Northern Illinois University. Orthopedics.

Connie Blow
clinical instructor, MS, University of North Carolina, PT, University of Missouri. Pediatrics.

Jeff Krug
clinical instructor, MS, University of Missouri; BSPT, University of Wisconsin. Adult neurology, pediatrics.

Erin Dannecker
associate professor, PhD, University of Florida. Musculoskeletal pain disorders, biopsychosocial factors.

Stephen Sayers
associate professor, PhD, University of Massachusetts. Exercise physiology.

Evan Prost
clinical instructor, BSPT, University of Missouri. Geriatrics, problem based instruction.

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Teresa Briedwell
director of admissions and advisement, clinical assistant professor, DPT, A.T. Still University of Health Sciences; BSPT, University of Missouri. Orthopedics, clinical practice, differential diagnosis.

Dana Martin
director of clinical education, clinical assistant professor, MPT, University of Missouri. Clinical education, manual therapy.

Jeff Bridges
clinical instructor, BS, MPT, University of Missouri. Musculoskeletal.

Application and Admission Information

Applicants who will have an undergraduate degree prior to entering the program will apply to the Graduate School online admission process in addition to the Departmental Application. Graduate School applications must be submitted by January 10th.

Departmental applications are required and are due in the PT Office by January 24th.

Students who are admitted without a degree will receive a bachelor's degree at completion of the first year.

All students are strongly encouraged to contact the Department Office for advisement and planning well in advance of application.

Admission Contact Information
Beverly Denbigh
http://shp.missouri.edu/pt/

Admission Criteria

- Fall deadline: N/A
- Summer deadline: January 10
- Minimum TOEFL score: 600/250/100 (paper/computer/internet)
  *additional criteria for specific subscales
- Minimum GRE score: Preferred V+Q=1000
- Minimum GPA: 3.0

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Prerequisites for the Doctoral Degree
Note: The DPT program accepts students to begin the professional program only for summer terms, which begin in June.

Admission to the DPT program is available through Regular Admission (applicants will have a bachelor's degree prior to beginning the professional program) or through an Early Admission option that allows students to enter the professional program with 90 credit hours.

All applicants must have at least a 3.0 GPA in successfully completed the core required courses and as a cumulative GPA.

On-campus interviews are required for admission to the professional program.

Students who enter without a bachelor's degree also must have satisfied the MU general education and graduation requirements and taken two Writing Intensive courses at MU.

Applicants are notified of the selection committee's decision in March.

All students are strongly encouraged to contact the School of Health Professions Student Affairs Office for advisement and planning well in advance of application.

Admission to the program is selective.

Required Application Materials
To the Graduate School:
- All required Graduate School documents

To the Program (http://shp.missouri.edu/pt/):
- Departmental application
- 2 letters of recommendation (included in the application packet)
- Curriculum Vitae (résumé) as specified by the application guidelines
- Official Transcripts (year of application, fall grades must be recorded on transcript)
- GRE score report

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Plan of Study
The professional program is offered in sequential blocks and requires full-time enrollment for three academic years and three summer sessions, beginning in the summer session following acceptance. The curriculum contains foundational and clinical sciences combining traditional lectures and course work, laboratory sessions, problem-based learning classes and clinical education. More than 200 clinical sites in Missouri and beyond are available for supervised clinical education.

A graduate must pass the National Physical Therapy Examination to receive a license to practice in the United States. The program is accredited by the Commission on Accreditation in Physical Therapy (CAPTE). Graduates are eligible for licensure anywhere in the United States.

Degree Requirements
All students admitted must maintain a 3.0 grade point average with no grade below C (2.0) in courses required for the degree. Failure to achieve a semester or professional cumulative grade point average of 3.0 in required courses will result in probation or dismissal from the program. Students are expected to maintain full-time enrollment in the curriculum and complete the degree requirements as outlined in the course of study. Any exception must be approved by departmental faculty. Students must demonstrate the personal behaviors and characteristics associated with optimal patient welfare and professional trust.

Courses

See Physical Therapy (PHTHR) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Physics & Astronomy Graduate Programs

Contact Information

College of Arts and Science
223 Physics Building
573-882-3335
http://physics.missouri.edu/graduate/

About Physics & Astronomy

The University of Missouri offers exceptional academic opportunities for graduate study in physics and astronomy. The department allows close contact between faculty and students in a friendly environment, while providing outstanding research facilities both on and off campus and various means of financial aid for both undergraduate and graduate students.

Classes are generally small and provide ample opportunity for informal contact between students and faculty. The faculty have a strong commitment to teaching as well as research. There is a deep concern for preparing students for existing jobs in physics and related disciplines.

Degrees Offered

- Master of Science in Physics & Astronomy
- Doctorate in Physics & Astronomy

Research Resources

The research opportunities offered by the Department of Physics and Astronomy are in some cases unique at a university and at a level expected only in much larger departments. The main focus of research is in the area of Condensed Matter Theory and Experiment. These research efforts are fostered by the existence of the University of Missouri Research Reactor (MURR), a 10 MW light-water moderated reactor that is the highest-power university research reactor in the country. Furthermore, there are other internationally recognized research programs in the areas of biological physics, alternative energy research, and astrophysics.

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Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Physics and Astronomy Faculty

Peter Pfeifer
chair, professor, PhD, Swiss Federal Institute of Technology, Zurich. Surface physics.

Dorina Kosztin
director of undergraduate studies, resident instruction associate professor, PhD, University of Illinois, Urbana-Champaign.

Carsten A. Ullrich
director of graduate studies, associate professor, PhD, University of Wurzburg, Germany. Condensed matter.

H.R. Chandrasekhar
professor, PhD, Purdue University. Optical spectroscopy.

Meera Chandrasekhar
Curators' Distinguished Teaching Professor, PhD, Brown University. Condensed matter physics and optical spectroscopy.

Shi-Jie Chen
professor, PhD, University of California, San Diego. Biological physics.

Robert V. Duncan
professor and vice chancellor of research, PhD, University of California-Santa Barbara. Low-temperature physics.

Gabor Forgacs
George H. Vineyard Distinguished Professor of Theoretical Physics, PhD, Eotvos Roland University, Budapest. Biological physics and Statistical Mechanics.

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Shubhra Gangopadhyay
LaPierre Chair and professor of physics and electrical engineering, PhD, Indian Institute of Technology, Kharagpur. Condensed matter.

Suchi Guha
associate professor, PhD, Arizona State University. Condensed matter physics and optical spectroscopy.

Deborah Hanuscin
assistant professor of physics and learning,teaching and curriculum (College of Education), PhD, Indiana University. Teaching and learning of physics, scientific literacy and K-12 teacher education.

M. Frederick Hawthorne
professor and co-director of the International Institute for Nano and Molecular Medicine, PhD, UCLA, California. Molecular medicine.

Kattesh Katti
Curators' Professor of radiology and physics and Margaret Proctor Mulligan Professor in Medical Research, PhD, Indian Institute of Science, Bangalore. Radiology and bio-medical optics.

Gavin King
assistant professor, PhD, Harvard University. Single molecule biophysics.

Karen King
assistant teaching professor, PhD, Dartmouth College. Medical imaging and biomechanical modeling.

Sergei Kopeikin
associate professor, PhD, Space Research Institute of the Academy of Science of the USSR. General relativity and cosmology.

Ioan Kosztin
associate professor, PhD, University of Illinois, Urbana-Champaign. Computational biological physics.

Aigen Li
associate professor, PhD, Leiden University, The Netherlands. Physics and chemistry of interstellar dust.

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Bahram Mashhoon
professor, PhD, Princeton University. Relativity and gravitation.

Paul Miceli
professor, PhD, University of Illinois, Urbana-Champaign. Condensed matter.

Wouter Montfrooij
associate professor, PhD, University of Delft. Neutron scattering.

Sashi Satpathy
Curators' Professor, PhD, University of Illinois. Urbana-Champaign. Condensed matter.

Angela Speck
associate professor, PhD, University College, London. Infrared astronomy and stellar evolution.

Haskell Taub
professor, PhD, Cornell University. Condensed matter.

Owen P. Vajk
assistant professor, PhD, Stanford University. Condensed matter.

Giovanni Vignale
Curators' Professor and Millsap Distinguished Professor, PhD, Northwestern University. Condensed matter.

Carlos Wexler
associate professor, PhD, University of Washington. Condensed matter.

Ping Yu
associate professor, PhD, Hong Kong University of Science and Technology. Optoelectronics and biomedical imaging.

Yun Zhang
resident instruction assistant professor, PhD, University of California, San Diego. Instruction in physics.

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Xiaoqin Zou
assistant professor, PhD, University of California, San Diego. Biological physics.

Adjunct Faculty

Sunder Balasubramanian
adjunct assistant professor, PhD, Purdue University. Spectroscopy and biomedical imaging.

Carmen Chicone
adjunct professor, PhD, University of Wisconsin. Mathematical physics, gravitation.

Xudong (Sherman) Fan
adjunct associate professor of physics, assistant professor at biological engineering, PhD, Oregon Center for Optics, University of Oregon. Biological engineering and physics.

John Farmer
adjunct associate professor of physics, program director at the Research Reactor Center, PhD, Kansas State University. Condensed matter.

Flemming Y. Hansen
adjunct professor, PhD, Technical University of Denmark. Phase transitions and quantum chemistry.

Friedrich Hehl
adjunct professor, PhD, Technical University of Clausthal, Germany. Gravitation and relativity theory.

Adam Helfer
adjunct professor, PhD, Oxford University (UK). Gravitation and relativity.

Helmut Kaiser
adjunct professor, PhD, Technical University of Vienna, Austria. Neutron Scattering.

Adrian Neagu
adjunct professor, PhD, University Babes-Bolyai, Cluj-Napoca, Romania. Theoretical biophysics.

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Zoran S. Popovic
adjunct professor, PhD, Belgrade University. Condensed matter theory.

Louis M. Ross
adjunct instructor, Electron microscopy.

Chun Tang
adjunct assistant professor, PhD, University of Maryland. Biochemistry.

William Yelon
adjunct professor of physics, PhD, Carnegie Mellon University. Neutron scattering.

Emeritus Faculty

David L. Cowan
professor emeritus, PhD, University of Wisconsin. Condensed matter.

Charles J. Peterson
associate professor emeritus, PhD, University of California-Berkeley. Observational astronomy.

Brian DeFacio
professor emeritus, PhD, Texas A&M University. Mathematical physics.

Louis V. Holroyd
professor emeritus, PhD, University of Notre Dame.

Patricia Plummer
professor emeritus, PhD, University of Texas. Chemical physics.

James J. Rhyne
professor emeritus, PhD, Iowa State University. Condensed matter.

Guy Schupp
professor emeritus, PhD, Iowa State University. Mossbauer scattering.

Clifford W. Tompson
professor emeritus, PhD, University of Missouri. Condensed matter.

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Samuel A. Werner
professor emeritus, PhD, University of Michigan. Neutron Scattering, Condensed Matter.

Henry W. White
professor emeritus, PhD, University of California-Riverside. Condensed matter.

Joseph E. Willett
professor emeritus, PhD, University of Missouri. Plasma theory.

Admission Contact Information

Dr. Carsten A. Ullrich
424 Physics Building; Columbia, MO 65211
573-882-2467

Admission Criteria

Fall deadline: March 15
Spring deadline: Rolling

- Minimum TOEFL score: 550/213/80 (paper/computer/internet)
- Minimum GRE score: none set

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Program:

- Departmental application
- 3 letters of recommendation (use form provided by department) from three of your professors who are familiar with you and your work
- Short description of your interests, academic background and plans of study
- GRE and TOEFL score reports
- GRE physics subject test report (optional)
- Official transcripts

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Master of Science in Physics & Astronomy

About the Master of Science

The master of science degree in physics prepares students for a variety of scientific careers. Since physics is the most fundamental of the physical sciences, graduate-level studies in the field provide essential knowledge for application in many areas. Students with strong backgrounds in physics, as well as in areas ranging from biology to engineering, are encouraged to consider a personalized MS program in physics. Graduates have many job opportunities in a variety of areas.

Degree Requirements

In general, students must present at least 30 credit hours for the MS degree, including at least 15 hours in courses at the 8000 level. The program must include at least 15 hours of physics courses. There is no foreign language requirement.

Research

A formal thesis is not usually required for the MS degree, but some research is essential, including a report on the results, and three to six hours of research credit normally is required. Thesis credit may be earned for work done in the physics department, or in a related area, at the discretion of the student and advisory committee.

Examinations

Master's candidates must pass a qualifying examination and an oral examination before their graduation.

Physical Science Option

The master of science (physical science) degree is designed for those preparing to teach more than one science or for those broadening their foundation in science before proceeding to the doctoral degree. It emphasizes broad training in physics, chemistry and mathematics. No thesis is required.

Plan of Study

Of the required 40 hours of graduate credit, 32 hours are distributed among the departments of physics, chemistry and mathematics, and eight hours are elected from other disciplines approved by the candidate's advisers. A student must complete at least eight hours in 8000-level courses, which should not include more than three hours in

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seminar courses. This advanced work must be in the fields mentioned above. Mathematics 1500 and 1700, or their equivalents, should be presented for admission to candidacy or be taken without credit toward the degree. If not taken before admission, Mathematics 2300 or its equivalent must be included in the program for the degree.

Participation

Graduate students in physics are expected to take a full and active part in departmental activities. Participation in research programs, departmental lectures and colloquia are considered a normal part of a graduate program.

Doctorate in Physics & Astronomy

Admission

For admission requirements, see Admission Criteria.

About the Doctorate

The doctor of philosophy degree is designed to educate scientists capable of independently formulating and solving problems of fundamental importance.

Degree Requirements

In general, A Ph.D. Degree requires completion of a minimum of 18 hours beyond the Master's Degree, with a grade of 3.0 (B) or better, and completion of the department qualifying examination at the Ph.D. pass level. The degree candidate must also meet the residency requirement. For more details, please consult the department's web site or ask the director of graduate studies.

Plan of Study

The specific plan of study for a PhD in physics, planned in consultation with the student's doctoral program committee, is selected to fit each student's academic background, experience and objectives. There is no foreign language requirement.

Comprehensive Exam

The candidate is required to pass a comprehensive examination. At the time of the examination, each candidate must have completed (or be currently enrolled in) all of the courses in their PhD program. In special

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cases, the comprehensive examination may be taken with one course outstanding.

Research
The candidate shall carry out original research and present an acceptable doctoral dissertation on a topic approved by the candidate's program committee. The candidate must successfully defend the dissertation in a final examination.

Courses

See these Physics and Astronomy graduate courses in the myZou online system:

Physics (PHYSCS)
Astronomy (ASTRON)

END OF PROGRAM DESCRIPTION

Plant, Insect & Microbial Sciences Graduate Programs

Contact Information

Division of Plant Sciences
1-41 Agriculture Building
573-882-3001
573-882-2699
http://plantsci.missouri.edu/about/

About Plant, Insect & Microbial Sciences Graduate Programs

The Division of Plant Sciences maintains excellent graduate programs with classroom instruction and research supervision provided by leading scientists in the field. The DPS offers graduate programs leading to the Master of Science (MS) and Doctor of Philosophy (PhD) degrees in Plant, Insect and Microbial Sciences. A student can select training from a wide range of courses and research programs to prepare for a career in research, teaching, industry and extension work. Students can follow a traditional curriculum or take advantage of the cross-disciplinary expertise that exists within the division.

Programmatic Interactions

Students also benefit from interaction with closely allied academic units on and off campus. Students work with scientists in two campus-based USDA research units associated with the division: the Plant Genetics Unit and the Biological Control of Insects Research Laboratory. Additional opportunities exist for interaction with scientists at the Donald Danforth Plant Science Center in St. Louis. Numerous USDA and Danforth Center scientists hold adjunct appointments in the DPS. Students in the DPS are encouraged to interact with interdisciplinary programs on campus such as the Interdisciplinary Plant Group, the Molecular Biology Program, the Genetics Area Program, the Center for Agroforestry and the Missouri Precision Agriculture Center.

Degrees

The Division of Plant Sciences offers graduate programs in Plant, Insect

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& Microbial Sciences leading to the Master of Science (MS) and Doctor of Philosophy (PhD) degrees.

Areas of Study
A student can select training from a wide range of courses and research programs to prepare for a career in research, teaching, industry and extension work. Students may complete their graduate degrees through any of the Graduate Program Areas:

- Crop, Soil & Pest Management
- Entomology
- Horticulture
- Plant Biology & Genetics
- Plant Stress Biology

Plant, Insect and Microbial Sciences Faculty

Heidi M. Appel
senior research scientist, PhD, University of Michigan. Biology, ecology and evolution.

Wayne C. Bailey
associate professor, PhD, Iowa State University. Forage and field crop entomology.

Bruce A. Barrett
professor, PhD, Washington State University. Insect behavior, tree fruit entomology.

Dale G. Blevins
professor, PhD, University of Kentucky. Plant physiology.

Kevin Bradley
associate professor, PhD, Virginia Tech. Weed science.

Johann N. Bruhn
research associate professor, PhD, University of California-Berkeley. Forest mycology and mushroom cultivation.

Arun K. Chatterjee
professor, PhD, University of Guelph. Molecular genetics of plant bacteria.

continued on next page

Michael Collins
director, Division of Plant Sciences, PhD, University of Kentucky. Crop science, forage management and utilization.

Georgia L. Davis
associate professor, PhD, University of Wisconsin. Corn genetics.

James T. English
associate director, Division of Plant Sciences, professor, PhD, University of Florida. Molecular ecology of plant microbe interactions.

Deborah L. Finke
assistant professor, PhD, University of Maryland. Entomology/Plant-insect interactions.

Felix B. Fritschi
assistant professor, PhD, University of California-Davis. Crop physiology.

Walter Gassmann
associate professor, PhD, University of California-San Diego. Molecular plant pathogen interactions.

Mary Ann Gowdy
resident teaching assistant professor, PhD, Oklahoma State University. Floriculture.

Robert D. Hall
professor, associate vice chancellor for research, PhD, Virginia Polytechnic Institute. Medicinal, veterinary and forensic entomology.

Richard M. Houseman
associate professor, PhD, Texas A&M University. Insect ecology and behavior in human environments.

Won Kyo Jung
research assistant professor, PhD, University of Missouri. Rice production and soil management technologies.

continued on next page

Robert L. Kallenbach
extension program leader, professor, PhD, Texas Tech University. Forage management.

Marc J. Linit
associate dean, College of Agriculture, Food & Natural Resources, professor, PhD, University of Arkansas. Ecology of forest insects.

John A. Lory
extension associate professor, PhD, University of Minnesota. Environmental nutrient management.

Anne L. McKendry
associate professor, PhD, University of Manitoba, Canada. Wheat breeding.

Jeanne D. Mihail
professor, PhD, University of Arizona. Fungal ecology and mushroom cultivation.

Gerald L. Miller (Lee)
assistant professor, PhD, North Carolina State University. Disease control in turfgrasses.

Melissa G. Mitchum
assistant professor, PhD, North Carolina State University. Molecular plant nematode interactions.

Manjula V. Nathan
extension associate professor, director of the Soil Testing and Plant Diagnostic Services Laboratories, PhD, South Dakota State University.

Kelly A. Nelson
research associate professor, PhD, Michigan State University. Crop production systems.

Henry T. Nguyen
endowed professor, PhD, University of Missouri. Genetics and biotechnology.

continued on next page

Craig A. Roberts
professor, PhD, University of Arkansas. Forage quality.

Peter C. Scharf
professor, PhD, Virginia Tech. Nutrient management.

James E. Schoelz
director of graduate studies, professor, PhD, University of Kentucky. Molecular plant virus interactions.

Jack Schultz
director of Bond Life Sciences Center, professor, PhD, University of Washington. Ecology, biochemistry and molecular biology.

J. Grover Shannon
endowed professor, PhD, Purdue University. Soybean breeding.

Robert E. Sharp
professor, PhD, University of Lancaster, England. Plant physiology.

Robert W. Sites
professor, PhD, Washington State University. Insect systematics, ecology of aquatic insects.

David A. Sleper
professor, PhD, University of Wisconsin. Soybean breeding.

Reid J. Smeda
director of undergraduate programs, associate professor, PhD, Purdue University. Weed science.

Qisheng Song
associate professor, PhD, University of Maryland. Insect physiology and molecular biology.

Gary Stacey
endowed professor, PhD, University of Texas-Austin. Functional genomics of soybean microbe interactions.

continued on next page

Christopher J. Starbuck
associate professor, PhD, Oregon State University-Corvallis. Woody ornamentals.

W. Gene Stevens
extension professor, PhD, Mississippi State University. Crop production-soil fertility.

Richard K. Striegler
research associate professor, PhD, Michigan State University. Viticulture and enology.

Laura Sweets
extension associate professor, PhD, University of Minnesota. Agricultural extension plant pathology.

Kelly V. Tindall
research assistant professor, agricultural entomology, PhD, Louisiana State University.

David H. Trinklein
associate professor, PhD, University of Missouri. Greenhouse management, floriculture extension.

Michele R. Warmund
professor, PhD, University of Missouri. Fruit and nut crop physiology.

Jason W. Weirich
extension assistant professor, PhD, Mississippi State University. Weed science.

William J. Wiebold
professor, PhD, University of Georgia. Soybean and corn management.

J. Allen Wrather
professor, PhD, University of Missouri. Soybean disease control.

Xi Xiong
assistant professor, PhD, Oklahoma State University. Turfgrass management and physiology.

continued on next page

Zhanyuan Zhang
research associate professor, PhD, University of Nebraska. Plant transformation and gene regulation.

Adjunct Faculty

Stephen H. Anderson
adjunct professor, PhD, North Carolina State University. Soil physics.

Prakash R. Arelli
adjunct professor, PhD, University of Georgia. Soybean breeding and genetics.

Brenda T. Beerntsen
adjunct associate professor, PhD, University of Wisconsin-Madison. Entomology, medicinal-veterinary vectors.

Jennifer Benne
adjunct assistant professor, PhD, Michigan State University. Genetic influences on mosquito physiology and ecology.

Kristin D. Bilyeu
adjunct assistant professor, PhD, Baylor College of Medicine. Soybean seed molecular genetics.

Ed Cahoon
adjunct associate professor, PhD, Michigan State University. Soybean molecular biology.

Thomas A. Coudron
adjunct associate professor, PhD, North Dakota State University. Insect biochemistry and biological control.

Sherry Flint-Garcia
adjunct assistant professor, PhD, University of Missouri. Genetic diversity in maize.

Claude Fauquet
adjunct professor, PhD, Strasburg. Plant virology, tropical plant biotechnology.

continued on next page

Sanjun Gu
adjunct assistant professor, PhD University of Nebraska-Lincoln. Commercial vegetable and small fruit production.

J. Perry Gustafson
adjunct professor, PhD, University of California-Davis. Cereal genetics.

Eliot Herman
adjunct professor, PhD, University of California-San Diego. Soybean molecular biology.

Bruce E. Hibbard
adjunct associate professor, PhD, Colorado State University. Insect resistance management.

Jong Chan Hong
adjunct professor, PhD, University of Georgia. Plant developmental and stress responses.

Newell R. Kitchen
adjunct associate professor, PhD, Colorado State University. Soil nutrient management, precision agriculture.

Laszlo Kovacs
adjunct associate professor, PhD, University of Missouri. Vitis genomics and gene discovery.

Robert J. Kremer
adjunct professor, PhD, Mississippi State University. Microbiologist with the USDA-ARS Cropping Systems and Water Quality research unit.

Hari B. Krishnan
adjunct professor, PhD, Washington State University. Soybean molecular biology.

Robert K. Lawrence
adjunct assistant professor, PhD, Michigan State University. Forest entomology.

continued on next page

Arthur H. McIntosh
adjunct professor, ScD, Harvard University. Biological control, insect pathology.

Michael D. McMullen
adjunct professor, PhD, University of Chicago. Corn genetics.

Peter P. Motavalli
adjunct associate professor, PhD, Cornell University. Soil nutrient management.

Robert L. Myers
adjunct associate professor, PhD, University of Minnesota. Sustainable agriculture.

Mel Oliver
research leader, adjunct professor, PhD, University of Calgary. Plant biochemistry.

Holly J. Popham
adjunct assistant professor, PhD, University of Missouri. Insect virology and immunity.

Wenping Qiu
adjunct professor, PhD, North Carolina State University. Vitis genomics and gene discovery.

Daniel Schachtman
adjunct associate professor, PhD, Australian National University. Plant physiology and molecular biology.

Mary A. Schaeffer
adjunct associate professor, PhD, Duke University. Bioinformatics.

Kent S. Shelby
adjunct assistant professor, PhD, Oklahoma State University. Insect physiology and immunobiology.

David Stanley
research leader, adjunct professor, PhD, University of California - Berkeley. Entomology.

continued on next page

Chris Taylor
adjunct assistant professor, PhD, North Carolina State. Nematology and rhizosphere biology.

Paul Tracy
adjunct associate professor, PhD, Colorado State. Soil fertility.

P. Leszek Vincent
adjunct assistant professor, PhD, University of Natal, South Africa. Ethnobotany and plant systematics

John Walker
adjunct professor, PhD, University of Georgia. Plant responses to pathogens.

Oliver Yu
adjunct assistant professor, PhD, University of South Carolina. Soybean molecular biology.

Emeritus Faculty

Sam C. Anand
professor emeritus, PhD, University of Wisconsin. Soybean breeding and genetics.

G. Michael Chippendale
professor emeritus, PhD, University of Wisconsin. Insect physiology.

Edward H. Coe
professor emeritus, PhD, University of Illinois. Corn genetics.

Larry Darrah
professor emeritus, PhD, Iowa State University. Agronomy.

John H. Dunn
professor emeritus, PhD, Rutgers University. Turfgrass management.

Armon Keaster
professor emeritus, PhD, University of Missouri. Entomology.

continued on next page

Gary Krause
professor emeritus

Roger Mitchell
professor emeritus, PhD, Iowa State University, Agronomy.

Ralph Munson
associate professor emeritus, PhD, Iowa State University. Entomology.

Curtis J. Nelson
Curators' Professor Emeritus, PhD, University of Wisconsin. Crop physiology.

Gerry Neuffer
professor emeritus

Ben Puttler
assistant professor emeritus, BS, University of California-Berkeley. Entomology.

Thomas D. Wyllie
professor emeritus, PhD, University of Minnesota. Plant pathology.

About Plant, Insect & Microbial Sciences Graduate Application and Admission

Admission Contact Information

Christa Smith
1-41 Agriculture Building; Columbia, MO 65211
573-882-3001

Admission Criteria

- Fall deadline: flexible; January 15 for greatest financial aid considerations
- Minimum TOEFL score: 500/173 (paper/computer); IBT 61
- Minimum GRE score: none set
- Minimum GPA: 3.0
- Bachelor's degree from an accredited college
- Demonstrated capability to perform graduate-level work

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Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Plant, Insect & Microbial Sciences Program:

- 3 letters of recommendation
- GRE score report
- 1-2 page letter clearly articulating educational and professional goals
- Brief (2 pages) résumé

Financial Aid from the Program

Financial assistance is available to qualified students at both the MS and PhD levels, as either fellowships or research assistantships. Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Division-Wide Requirements

To satisfy the course requirements for a Master's degree, a student must complete:

- A minimum of 30 credit hours from courses numbered 7000 - 9000
- 15 credit hours (towards the 30 credit hour requirement) must be from courses numbered at the 8000 or 9000 level
- 12 credit hours (towards the 30 credit hour requirement) can be satisfied by research, readings and problems courses
- For the Horticulture Program Area, at least 6 credits must be from formal courses, excluding Problems and other independent study courses and only 6 credit hours of research (PInt S 8090) can count towards the 30 credit hour requirement, even though additional hours of research can be taken.

The Division-wide course requirements for the Master's degree are:

- **PInt S 8010** (PDF) Professionalism and Ethics (2 credits)
- Participation in the student seminar series
  - o **PInt S 9087** (1 credit)
  - o **PInt S 7087** (2 credits - Must enroll twice)
- **PInt S 8090** Thesis Research (1 - 10 credits per semester)

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To satisfy the course requirements for a doctoral degree, a student must complete:

- A minimum of 72 credit hours from courses numbered 7000-9000 (this includes dissertation research credit hours - i.e. Plnt S 9090)
- 15 credit hours (towards the 72 hour requirement) must be from courses numbered at the 8000 or 9000 level, exclusive of dissertation research, problems or independent study
- For the Horticulture Program Area, all doctoral students will have successfully completed the requirements for a Master's degree before beginning a doctoral program and no more than 30 hours of dissertation research may be counted towards the 72 hour minimum.

The Division wide requirements for the PhD degree are:

- **Plnt S 8010** (PDF) Professionalism and Ethics (2 credits)
- Participation in the student seminar series
  - o **Plnt S 9087** (2 credits - Must enroll twice; only 1 credit counts towards the 15 credit hour requirement of 8000/9000 level courses
  - o **Plnt S 7087** (3 credits - Must enroll 3 times)
- **Plnt S 9090** Dissertation Research (1 - 10 credits per semester)

During the Fall and Spring semesters, MS students must enroll for 9 credits to be considered a full time student. PhD students who have not completed their comprehensive exam must enroll for 9 credits to be considered a full time student.

Teaching requirement: with the exception of the Entomology Program Area, all students must participate in an approved teaching opportunity or an approved extension program. As an alternative, this requirement can be fulfilled by one additional seminar presentation in PLNT S 9087.

Satisfactory Rate of Progress

A student shall maintain a minimum grade point average of 3.0. All divisional course requirements (and any additional requirements set by the student's examination committee) shall be completed in a timely manner. All advisers will meet annually with each of their graduate advisees. They will discuss the student's performance, any problems that exist and any suggestions for improvement. The adviser will provide the student and the director of graduate studies with a written summary of the meeting as part of the annual program assessment process.

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Courses

See Plant, Insect and Microbial Sciences graduate courses in the myZou online system:

PLANT SCIENCE (PLNT S)
PLANT PATHOLOGY (PL PTH)

Graduate Program Area Requirements
Detailed descriptions of divisional curricula and procedures are available on the division's Web site.

Crop, Soil & Pest Management
The Crop, Soil and Pest Management program area emphasizes a customized approach towards the course of study. Each student will work with their advisor and graduate committee to develop a course of study best suited to the student's educational and career goals.

Entomology
The core requirements for the Master's degree in Entomology program are:

- **PInt S 7710** Systematic Entomology
- **PInt S 7820** Principles of Insect Physiology

The core requirements for the PhD degree in Entomology program are:

- **PInt S 7710** Systematic Entomology
- **PInt S 7820** Principles of Insect Physiology
- **PInt S 9810** Insect Ecology
- Two elective formal entomology courses

Horticulture
The Horticulture program area emphasizes a customized approach towards the course of study. Each student will work with their advisor and graduate committee to develop a course of study best suited to the student's educational and career goals.

Plant Biology & Genetics
The Plant Biology and Genetics program area emphasizes a customized approach towards the course of study. Each student will work with their advisor and graduate committee to develop a course of study best suited to the student's educational and career goals.

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Plant Stress Biology

The core requirements for the Master's and PhD degrees in Plant Stress Biology program are:

- Two Entry Level courses (to be completed in the first year). Choose from:
  - o **PInt S 7315** (PDF) Crop Physiology (3 credits)
  - o **PInt S 7320** (PDF) Plant Physiology (3 credits)
  - o **PInt S 7500** (PDF) Biology and Pathogenesis of Plant-Associated Microbes (4 credits)
  - o **PInt S 8505** (PDF) Introduction to Plant Stress Biology (2 credits)
- **PInt S 8530** Research with Plant Stress Agents (3 credits)

END OF PROGRAM DESCRIPTION

Political Science Graduate Programs

Contact Information

College of Arts and Science
113 Professional Building
573-882-2062
http://politicalscience.missouri.edu/

About the Program

The department emphasizes both quality teaching and research. Several faculty members have received awards and prizes for teaching excellence and innovative research. The department aims to train people as experts in the study of politics and government, while encouraging students to acquire a sufficient background in other disciplines to enable them to correlate their specialized knowledge with all aspects of modern life.

Financial Aid from the Program

Applications for admission and financial aid are considered on the basis of the entire packet submitted. Students may apply for departmental teaching and research assistantships and fellowships, as well as university scholarships and fellowships. Annually, about 20 departmental assistantships offer stipends of over $11,500 plus waivers of educational fees. Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Political Science Faculty

John R. Petrocik
chair, professor, PhD, University of Chicago. American politics, public opinion and voting, political parties, survey research.

James W. Endersby
director of graduate studies, associate professor, PhD, University of Texas-Austin. American politics (voting, elections and public opinion), formal political theory, methodology.

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L. Marvin Overby
professor, PhD, University of Oklahoma. American political institutions, politics of American south and Canadian politics.

Doh C. Shin
professor, PhD, University of Illinois. Comparative politics (Korea and Asia), quality of life and social indicators.

Peverill Squire
professor, PhD, University of California, Berkley. American political institutions, legislatures, elections.

Moises Arce
associate professor, PhD, University of New Mexico. Comparative politics (Latin America), comparative political economy.

Jay K. Dow
associate professor, PhD, University of Texas-Austin. American politics (voting and elections), formal political theory, methodology.

A. Cooper Drury
associate professor, PhD, University of Texas-Austin. International political economy, foreign policy, economic sanctions and political unrest.

Jonathan T. Krieckhaus
associate professor, PhD, Princeton University. Comparative politics (Latin America), comparative political economy, development.

Lael R. Keiser
associate professor, PhD, University of Wisconsin-Milwaukee. Public policy and American institutions.

Sean C. Nicholson-Crotty
associate professor, PhD, Texas A&M University. Public policy, American political institutions, state government.

David J. Webber
associate professor, PhD, Indiana University. Public policy (environment and biotechnology), American government and politics (Congress and state legislatures).

continued on next page

Robin E. Best
assistant professor, PhD, Binghamton University. Comparative politics (Europe), political parties and party systems, women and politics.

Justin Dyer
assistant professor, PhD, University of Texas. Public law, American constitutional development, jurisprudence, political theory.

Katharine M. Floros
assistant professor, PhD, University of Pittsburgh. International relations, international and civil conflict.

Stephen L. Quackenbush
assistant professor, PhD, University of Buffalo. International relations, international conflict, game theory.

Leslie Schwindt-Bayer
assistant professor, PhD, University of Arizona. Comparative politics, Latin America, comparative political institutions, gender and politics.

William T. Horner
resident instruction assistant professor, PhD, University of Texas. American politics, media and politics, state government.

Jeffrey D. Milyo
adjunct professor and professor of economics and public affairs, PhD, Stanford University. Political economy, law and economics, health policy.

Jill Nicholson-Crotty
adjunct professor and assistant professor of public affairs, PhD, Texas A&M University. Public policy (health, education, criminal justice), nonprofit organizations.

Lilliard E. Richardson, Jr.
adjunct professor and professor of public affairs, PhD, University of Texas. Public policy, state legislatures, research methods.

Betty Houchin Winfield
adjunct professor and professor of journalism, PhD, University of Washington. Political communication, media and the Presidency.

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Admission Contact Information

Dana Davis
113 Professional Bldg.
Columbia, MO 65211
573-882-2062

Admission Criteria

- Fall deadline: February 1
- Spring deadline: October 6
- Minimum TOEFL score: 570/230/89 (paper/computer/internet)
- Minimum GRE score: V+Q=1000 for master's; V+Q=1200 for doctoral
- Minimum GPA: 3.0 in last 60 hours and in political science courses
- Applicant should have at least 12 hours of upper-level course work in political science.
- An undergraduate major in an area other than political science may be acceptable.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Political Science Program:

- Departmental application
- 3 letters of recommendation (use form provided on the departmental site)
- GRE score report
- 1-2 page statement of purpose, describing interests and goals for graduate study
- Writing sample (preferred)

Satisfactory Progress

A graduate student must maintain a minimum 3.0 GPA after the first semester of graduate study and a 3.4 cumulative GPA in all subsequent semesters. A student should complete and pass required courses, activities, and examinations on schedule. The student's adviser and the director of graduate studies will monitor and provide an annual assessment of a student's progress. Failure to maintain satisfactory progress can have serious consequences, including dismissal from the program.

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Master of Arts in Political Science

Admission

For admission requirements and criteria, see About Political Science.

Careers

The MA can serve multiple career goals: community-college teaching, continuation of studies to the PhD, entrance into and advancement in public service, or acquisition of skills for a position in the private sector.

MA Degree Requirements

All MA students must complete Political Science 7000, 7010, and 9030. Each candidate must take one graduate seminar (8000 level) in each of three fields. Fields include: American political institutions and behavior, comparative politics and government, international relations, political theory, and public policy and administration. The department also offers an MA program with an emphasis in public policy.

The master's degree program culminates in a comprehensive oral examination and defense of the research project. The Master of Arts degree may be earned by completing either the thesis or the non-thesis program.

Thesis Option

Students wishing to advance from the master's program to the PhD program at MU must take the thesis option. The thesis program requires 30 hours of academic credit (at least 18 in 8000-level Political Science seminars) and an acceptable thesis for which up to six semester hours of credit must be earned (Political Science 8090).

Non-Thesis Option

The non-thesis program is a 30-hour generalist master of arts. It requires a student to take at least 30 hours of academic credit (at least 18 in 8000-level Political Science seminars) and to write a master's paper for which up to three hours of credit must be earned (Political Science 8085).

Satisfactory Progress

A master's student should maintain a minimum 3.0 GPA after the first semester and a 3.4 cumulative GPA in subsequent semesters. The MA program must be completed within five years of the first semester

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of enrollment. Most students complete the master's program within two years. See About Political Science for departmental guidelines for satisfactory progress.

Doctorate in Political Science

Admission

For admission requirements and criteria, see About Political Science. Admission into the PhD program is determined by the graduate committee's consideration of the applicant's performance on the GRE general test, the applicant's academic record, statement, and letters of recommendation.

Careers

Alumni with PhDs have received teaching appointments at public and private colleges as well as positions of responsibility in state and national government in the United States and in many foreign countries. In recent years, an average of five students a year entered the PhD job market. Approximately eighty percent of the PhD graduates became college teachers. Most of the remainder went into public service and a few into the private sector. Six departmental alumni have become college presidents.

Degree Requirements

A student's doctoral program must include at least 52 hours of graduate work, exclusive of dissertation research. At the option of the student's doctoral program committee, up to 24 hours of the MA program may be included in the PhD program.

Plan of Study

A student's program shall include at least 40 hours in Political Science courses and at least 40 hours in graduate seminars (8000 and above). Students choose a primary and secondary field from the four doctoral fields: American political institutions and behavior, comparative politics and government, international relations, and public policy and administration.

Graduate courses must include:

- A minimum of 12 seminar hours in the primary (research) field
- A minimum of nine seminar hours in a secondary field supporting

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the primary field
- A minimum of 13 hours in a methodology or research tool field. Required courses include Political Science 7000, 7010, and 9030. The remaining six hours in the methodology field may be in advanced formal or quantitative methods, advanced foreign language, or a combination of the two.
- A minimum of six hours in an outside field. These courses may be in a cognate field in support of relevant substantive fields or research methods related to dissertation research.

Besides completing the necessary course work, the candidate must demonstrate the capacity to use a research tool (such as a foreign language or statistics), should obtain some teaching experience in political science (for academic careers), must pass separately written and oral comprehensive examinations, must submit and defend a dissertation proposal, and must submit and defend a dissertation.

Length of Study

All required courses and the comprehensive examination must be completed within five years of the first semester in the graduate program. The dissertation must be completed and defended within five years of passing the comprehensive examination.
The PhD usually requires five years full time or the equivalent in part-time work beyond the bachelor's degree and four years beyond the master's degree. Full-time students (including teaching and research assistants) must carry a minimum of nine-hours of courses per semester (except for students conducting dissertation research).

Timeline

The first three years of doctoral study typically include course work and preparation for the comprehensive examinations. Comps (9970) are typically taken early in the fourth year. A proposal for dissertation research is defended within a few months of the comprehensive exams. The remaining time is devoted to dissertation research (9090).

Satisfactory Progress

A doctoral student should maintain a minimum 3.0 GPA after the first semester and a 3.4 cumulative GPA in subsequent semesters. Comprehensive exams and dissertation proposal must be completed within a timely fashion. The PhD program must be completed within

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ten years of the first semester of enrollment. Most students complete the doctoral program within five years. See About Political Science for departmental guidelines for satisfactory progress.

Political Science Courses

Additional information regarding Political Science (POL SC) courses can be found in the myZou online course catalog system at http://myzou.missouri.edu.

POL SC 7000--Introductory Statistics for Political Science (3).
Basic course in applied statistics and inference using extensive examples from voting behavior, congressional behavior, international relations and public policy. Topics included nonparametric measures, probability, and rudimentary hypothesis testing; computer applications with political data using SAS. Prerequisites: graduate standing and MATH 1100/1120 or equivalent, concurrent enrollment in POL SC 4010.

POL SC 7010--Computing Methods (1).
Develops computer-based skills with political science data. SAS, and other packages used in mainframe and PC environments. Graded on S/U basis only. Prerequisite: concurrent enrollment in POL SC 4000.

POL SC 7085--Problems in Political Science (cr.arr.).
Individual study in one of the fields of Political Science. Prerequisite: graduate standing and instructor's consent.

POL SC 8085--Master Research in Political Science (cr.arr.).
Independent research not leading to a thesis. Graded on S/U basis only. Prerequisite: instructor's consent.

POL SC 8090--Masters Research in Political Science (cr.arr.).
Independent research not leading to thesis. Graded on S/U basis only. Prerequisite: graduate standing.

POL SC 9000--Scope and Methods (3).
Examines the major fields in the discipline, assumptions underlying empirical social science and theoretical issues in the study of politics. Primarily for doctoral candidates in political science. Prerequisite: graduate standing.

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POL SC 9010--Research Design and Analysis (3).
Research design, social measurement and statistical analysis for study of political phenomena. Prerequisite: graduate standing.

POL SC 9020--Inference and Political Statistics (3).
Point and interval estimation and statistical hypothesis testing with applications to political research. Data and examples drawn mostly from electoral behavior, conflict theory, international relations and public policy. Primarily for political science students. Prerequisite: graduate standing.

POL SC 9030--Linear Models in Politics (3).
Linear and non-linear multivariate estimation techniques with applications to political science research. Prerequisite: graduate standing.

POL SC 9040--Advanced Political Methodology (3).
Analytic strategies and statistical models applicable to social science research. Emphasis on modeling political phenomena. Topics vary, include linear and nonlinear models, multidimensional scaling. Prerequisite: graduate standing.

POL SC 9050--Introduction to Formal Political Theory (3).
Formal and mathematical models of political institutions and behavior. Topics may include social choice, game theory, spatial models, coalition formation. Prerequisite: graduate standing.

POL SC 9085--Problems in Political Science (cr.arr.).
For graduate students with necessary prerequisite courses. Topics in one of the fields of political science for individual study. Prerequisite: graduate standing.

POL SC 9090--Ph D Research in Political Science (cr.arr.).
Independent research leading to thesis. Graded on a S/U basis only. Prerequisite: graduate standing.

POL SC 9100--American Political Behavior (3).
Critical examination of literature on political behavior in the United States. Topics include voting and elections, public opinion, parties and interest groups, political psychology, communication, elites, and collective action. Prerequisite: graduate standing.

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POL SC 9120--Voting and Elections (3).
Research seminar on political participation, voter choice, campaigns, and elections, primarily in the United States. Covers theories, approaches and research on electoral behavior. Prerequisite: graduate standing.

POL SC 9130--Public Opinion (3).
Intensive study of public opinion theory and analysis. Prerequisite: graduate standing.

POL SC 9140--American Political Institutions (3).
Critical examination of literature on political institutions in the United States. Topics include Congress, the Presidency, courts, the bureaucracy, political organizations, federalism, and institutional dynamics. Prerequisite: graduate standing.

POL SC 9150--Political Parties (3).
Research seminar on the organization and activities of political parties, primarily in the United States. Attention to historical development, nature of party change, functions, elites, membership, political finance, and policy formulation. Prerequisite: graduate standing.

POL SC 9160--Interest Groups (3).
Research seminar on nonpartisan organizations seeking to influence the public policy agenda. Includes problems of collective action, mobilization and organization of interest groups, strategies and tactics, lobbying, political movements, theories and research. Prerequisite: graduate standing.

POL SC 9170--Legislative Institutions (3).
Research seminar on the U.S. Congress and legislative institutions generally. Topics include the legislative process, policy change, committees, political parties, leadership, representation, and relations with other branches of government. Prerequisite: graduate standing.

POL SC 9171--Political Economy of Public Affairs (3).
Course focuses on formal theories of public decision-making, collective choice and strategic interaction of public actors in the policy process using tools such as welfare economics, social choice, game theory, logic of collective action, public choice, and principal agent models. Prerequisite: PhD standing or instructor's consent. Graded on A/F basis only.

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POL SC 9180--Executive Politics (3).
Research seminar on the U.S. Presidency, executive decision-making and influence. Topics include presidential leadership, historical development of the presidency, presidential power, agenda-setting, governors, mayors, and influences on opinion and other branches of government. Prerequisite: graduate standing.

POL SC 9190--Research in American Politics (3).
Directed research into one or more specific aspects of American Politics, behavior, and institutions. Prerequisite: graduate standing.

POL SC 9200--Judicial Behavior (3).
Critical examination, both conceptual and methodological, and behavioral literature in public law. Emphasizes impact of judicial decisions and relations of judiciaries to their environments. Prerequisite: graduate standing.

POL SC 9230--Public Law (3).
Research seminar on the judicial process in the United States. Prerequisite: graduate standing.

POL SC 9240--Racial and Ethnic Politics (3).
Theories, institutional processes, and behaviors pertaining to social defined racial and ethnic groups. Topics include social dominance, representation, mobilization, public opinion, and the influence of racial and ethnic factors on the American political process. Prerequisite: graduate standing.

POL SC 9300--Federalism and Intergovernmental Relations (3).
Analyzes relationships among American governmental units emphasizing national-state relations and metropolitan area problems. Prerequisite: graduate standing.

POL SC 9310--Public Policy (3).
Covers the basic theory, approaches, problems and issues relating to the scope, development and implementation of public policy. Prerequisite: graduate standing.

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POL SC 9320--Administrative Politics (3).
Critical examination of literature relating to selected topics in public bureaucracies. Prerequisite: graduate standing.

POL SC 9330--Research in Policy and Administration (3).
Contemporary research in public policy, bureaucratic politics, public management and administration.

POL SC 9340--Urban Politics (3).
Research seminar on local politics and governance, particularly of urban areas. Topics include political machines and reform, national policy and the cities, political conflict, and leadership. Prerequisite: graduate standing.

POL SC 9350--Public Policy, Processes and Strategies (3).
(Same as Public Affairs 8170). Provides an overview of the history, function, size, scope, development, and management of the nonprofit sector. Historical, political, economic, and social perspectives are used to examine the meaning of voluntarism, charity, philanthropy, and the nonprofit sector. Graded on A/F basis.

POL SC 9390--Administration and Public Policy (3).
Directed research in Public Administration or Public Policy. Inquire as to the emphasis for any given semester. Prerequisite: graduate standing.

POL SC 9400--Introduction to International Relations (3).
Analysis, evaluation of some basic theories which attempt to explain international affairs. Prerequisite: graduate standing.

POL SC 9420--Quantitative Approaches in International Relations (3).
Research seminar emphasizing quantitative analysis of large data sets on international politics, especially international conflict. Topics include conflict escalation, correlates of war, deterrence, alliance behavior and the democratic peace. Prerequisite: graduate standing.

POL SC 9430--International Political Economy (3).
Theories of political economy and current problems such as North-South relations, international trade, monetary relations, aid regimes, and international divisions of labor. Prerequisite: graduate standing.

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POL SC 9440--Foreign Policy Analysis (3).
Research seminar assessing foreign policy decisions and outcomes with particular attention given to decision-making. Both theoretical and empirical methods for testing foreign policy are considered. Approaches include domestic politics, bureaucratic, and psychological models.

POL SC 9450--International Conflict (3).
This is an advaned seminar in international conflict. The range of material that might be included is vast, so an effort will be made to balance overall coverage with the need to look in more depth at some especially salient areas in the literature. The seminar unfolds in five parts. Prerequisite: graduate standing.

POL SC 9460--Coercive Diplomacy (3).
Research seminar on how nations apply political and economic sanctions on other nations in order to compel or entice changes in foreign policy and/or government behavior. How threats (short of conflict) and incentives govern international relations. Prerequisite: graduate standing.

POL SC 9490--Selected Themes in International Relations (3).
Intensive study of foreign policy formulation and implementation; special emphasis on American foreign policies. Prerequisite: graduate standing.

POL SC 9600--Introduction to Comparative Politics (3).
Study of theories and approaches to comparative politics in Europe, Asia and/or Latin America. Prerequisite: graduate standing.

POL SC 9610--Latin American Politics (3).
Research seminar on politics and government in Central and South America. Topics include modernization and dependency theories, civil-military relations, economics adjustment, democratic transitions, and area and country studies. Prerequisite: graduate standing.

POL SC 9620--Politics of Industrial Societies (3).
Comparative analysis of public policy in Western democracies. Emphasis on economic policy and related policy areas. Comparisons of Western European countries with United States, Japan, Russia when appropriate. Prerequisite: graduate standing.

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POL SC 9630--European Union Politics (3).
Research seminar on the politics of the European Union. Topics include historical development of European integration, EU institutional structure, enlargement, and EU economic, social and foreign policies. Prerequisite: graduate standing.

POL SC 9640--East Asian Politics (3).
Intensive study of selected topics in the internal and external politics of China, Japan and Korea. Prerequisite: graduate standing.

POL SC 9650--African Politics (3).
Research seminar on comparative African politics. Theory and research on sub-Saharan post-independence governance on the African continent. Prerequisite: graduate standing.

POL SC 9670--European Transitions (3).
Research seminar comparing post-communist transitions with those from previous European transformations along economic, political, and social lines. The course focuses on testing theories and on comparing transitional experiences in search of generalizable results. Prerequisite: graduate standing.

POL SC 9680--Third World Politics (3).
Research seminar on the politics of the developing world. Theory, literature, and data analysis regarding government and governance of developing nations in Africa, Asia, and Latin America. Prerequisite: graduate standing.

POL SC 9700--Democratization (3).
Research seminar on the third wave of democratization. Classical and contemporary conceptions of democracy, measurement, theories, trends, and influences on democratization across the globe. Prerequisite: graduate standing.

POL SC 9710--Comparative Political Economy (3).
Interdisciplinary, comparative analysis of political aspects of political economy, rural development, and related issues. Prerequisite: graduate standing.

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POL SC 9720--Comparative Political Institutions (3).
Research seminar on comparative political institutions. Debates in comparative politics on the influence of rules and institutions on political decisions in developed democracies. Topics include political parties, legislatures, governments, and electoral rules. Prerequisite: graduate standing.

POL SC 9790--Seminar in Comparative Politics (3).
Comparative study of selected aspects of political systems. Variable content. May be repeated for credit. Prerequisite: graduate standing.

POL SC 9800--Classical Political Theory (3).
Intensive analysis of great classical and medieval thinkers: Pre-Socratics through the Two Swords controversy. Course covers primary sources, critical works, sociohistorical background of the ideas, their contemporary relevance. Prerequisite: graduate standing.

POL SC 9810--Modern Political Theory (3).
Intensive analysis of great modern theorists from Machiavelli to Mill. Course covers classical texts, criticism, sociohistorical background, and contemporary relevance of ideas. Prerequisite: graduate standing.

POL SC 9820--Contemporary Political Theory (3).
Twentieth-century Marxism, existentialism, critical theory, postmodernism, environmental thought, liberation theology, biological approaches. Primary readings and critical literature. Prerequisite: graduate standing.

POL SC 9830--American Political Thought (3).
Overview of central problems in American political thought, with particular attention to the Founding and Constitutional eras. Readings include primary texts, classic interpretations, and contemporary critical debates about the American tradition. Prerequisite: graduate standing.

POL SC 9890--Selected Themes in Political Thought (3).
Intensive examination of selected themes and problems in political thought. Themes may include: feminist political thought, perspectives on politics and violence, nationalism and post-colonial thought, or political theory and political culture. Prerequisite: graduate standing.

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POL SC 9901--Topics in Political Science (cr.arr.).
Organized study of selected topics. Subjects and earnable credit vary from semester to semester. Prerequisites: graduate standing.

POL SC 9910--Leadership in Civic Education (3).
Intensive workshop for Missouri secondary social studies teachers. Includes instructional materials on U.S. and Missouri governments, lectures by leading scholars, breakout sessions, and interactions with government practitioners. Prerequisite: graduate standing.

POL SC 9970--Independent Readings for Ph.D. Comprehensive Examinations (1-9).
Graded on S/U basis only. Prerequisite: graduate standing.

END OF PROGRAM DESCRIPTION

Psychological Sciences Graduate Programs

Contact Information

College of Arts and Science
210 McAlester Hall
573-882-0838
FAX 573-882-7710
http://psychology.missouri.edu
http://psychology.missouri.edu/grad

About Psychological Sciences

The Department of Psychological Sciences offers a doctoral program with emphasis in Clinical Psychology, Cognition and Neuroscience, Developmental Psychology, Quantitative Psychology, and Social/ Personality Psychology. The department also offers a dual program in Child Clinical and Developmental Psychology. All emphasis areas offer broad empirical and theoretical training with a research emphasis. The Clinical Psychology emphasis area is accredited by the American Psychological Association.

Financial Aid from the Program

Financial aid is available through departmental research and teaching assistantships and from Graduate School fellowships.

Psychological Sciences Faculty

B. Ann Bettencourt
chair, professor, PhD, University of Southern California. Intergroup processes; ethnic prejudice; stereotyping and expectancy violation, as well as influence of social identity on subjective well-being.

Jamie Arndt
professor, PhD, University of Arizona. Social psychology, motivation, terror management.

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Debora Bell
professor, PhD, West Virginia University, associate chair for clinical sciences and director of clinical training. Youth anxiety and depression, especially social, social-cognitive, and emotion regulation aspects of youth internalizing problems.

Charles M. Borduin
professor, PhD, University of Memphis. Family interaction; child-adolescent psychopathology; multisystemic model for treating juvenile delinquency; child abuse; and autism.

M. Lynne Cooper
professor, PhD, University of California-Santa Cruz. Personality and motivational influences on risk-taking behaviors; affect regulation; interrelationships among risk-taking behaviors; stress, coping, and health; gender differences in the above processes.

Nelson Cowan
Curators' Professor, PhD, University of Wisconsin. Working memory and attention and their development.

David C. Geary
professor, PhD, University of California-Riverside. Development of numerical and spatial cognition; , mathematical learning disabilities.

Laura A. King
professor, PhD, University of California-Davis. Personality, motivation and subjective well-being; personal goals, life story and meaning in life; emotional expression and health.

Moshe Naveh-Benjamin
professor, PhD, University of Michigan. Adult-age changes in episodic memory and the interaction of attention, encoding and retrieval processes.

Jeff Rouder
professor, PhD, University of California-Irvine. Perception, memory, decision-making.

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Todd R. Schachtman
professor, PhD, State University of New York-Binghamton. Animal learning, memory and conditioning; human covariation judgments; stress, conditioning and health; animal behavior.

Kennon Sheldon
professor, PhD, University of California-Davis. Motivation, personal goals, psychological adjustment and personality development; social dilemmas and the evolution of cooperation; creativity; positive psychology.

Kenneth J. Sher
professor, PhD, Indiana University. High-risk studies of alcoholism, psychological effects of alcohol; anxiety and anxiety disorders; psychopathology and prevention.

Wendy Slutske
professor, PhD, University of Minnesota. Classification and etiology of externalizing psychopathology (alcoholism, and substance abuse, conduct disorder, antisocial personality disorder); behavior genetic studies.

Timothy Trull
professor, PhD, University of Kentucky. Diagnosis and classification of psychopathology, particularly personality disorders; personality assessment; borderline personality disorder; psychometrics; ambulatory assessment; personality and addictions; dialectical behavior therapy.

Phillip Wood
professor, PhD, University of Minnesota. Structural equation modeling; , statistical methodologies for longitudinal data; , alcohol, other substance use, and other problem behaviors.

Bruce Bartholow
associate professor, PhD, University of Missouri-Columbia. Person perception, stereotyping, aggression, correlates and consequences of alcohol use; all studied using social cognitive neuroscience approach.

continued on next page

Steven A. Hackley
associate professor, PhD, University of Wisconsin-Madison. Cognitive and clinical neuroscience, human electrophysiology, attention and performance, Parkinson's disease.

John Kerns
associate professor, PhD, University of Illinois. Cognitive and emotional control, their involvement in the development of schizophrenia, functional brain imaging.

Dennis Miller
associate professor, PhD, Texas A&M University. Neuropharmacology and behavioral pharmacology of nicotine.

Denis McCarthy
associate professor, PhD, University of Kentucky. Cognitive motivations for alcohol use and drinking and driving behavior; genetic, personality, and environmental factors that influence alcohol-related learning.

Thomas M. Piasecki
associate professor, PhD, University of Wisconsin. Individual differences in drug motivation, negative reinforcement such as alcohol hangover and tobacco withdrawal symptoms.

Amanda Rose
associate professor, PhD, University of Illinois. Social competencies and children's friendships; gender differences in peer relations.

Michael A. Stadler
associate professor, PhD, Purdue University. Cognitive psychology, human learning and memory, attention, implicit learning.

Douglas Steinley
associate professor, PhD, University of Illinois. Multivariate statistical – cluster analysis and classification; the evolution and fragmentation of networks, terrorist networks.

Nicole Campione-Barr
assistant professor, PhD, University of Rochester. Interplay of multiple family relationships during adolescence; development of adolescent autonomy.

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Shawn Christ
assistant professor, PhD, Washington University. Cognitive and neural dysfunction in children with autism and other neurodevelopmental disorders, functional brain imaging.

Clintin Davis-Stober
assistant professor, PhD, University of Illinois at Urbana-Champaign. Mathematical models of decision making; statistical modeling and discrete geometry.

Kristin Hawley
assistant professor, PhD, University of California-Los Angeles. Therapy processes that affect outcomes for children and families in community-based mental health settings.

Luo Yuyan
assistant professor, PhD, University of Illinois. Developmental, infant cognition, infant understanding about agents.

Kristy vanMarle
assistant professor, PhD, Yale University. Development of infants' understanding of number and time, representation of quantity.

Matthew Will
assistant professor, PhD, University of Colorado. Behavioral neuroscience, drug addiction, feeding behavior, stress.

Melanie Skaggs Sheldon
assistant teaching professor, PhD, University of Missouri. Evolutionary approaches to romantic relationships and sexuality.

Alan Strathman
teaching professor, director of graduate studies, PhD, The Ohio State University. Attitudes and attitude change; consideration of future consequences of behavior; interpersonal relations.

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Application and Admissions Information

Admission Contact Information

Graduate Student Services
210 McAlester Hall
Columbia, MO 65211
573-882-0838
FAX 573-882-7710

Admission Criteria

- Fall deadline: December 1
- Minimum TOEFL score: 500/173 (paper/computer)
- Minimum GRE score: no specific minimum, subject test is strongly recommended
- Minimum GPA: 3.0

An interview is required for admission to the clinical psychology program. Students earn an MA en route to the PhD, but we do not admit students seeking a terminal master's degree.

There are not many rigid requirements, but most students accepted have an undergraduate major in psychology or its equivalent. Acceptance is based on training, quality of work, recommendations, GRE scores and other information. For additional information on admission requirements, consult Graduate Study in Psychology and Associated Fields, published annually by the American Psychological Association and available in most libraries.

Graduate students not accepted by the department may take psychology courses with the instructors' consent.

Required Application Materials

To the Graduate School:

- Graduate School online application
- 1 official copy of each college transcript where a degree was earned or is pending

To the Psychology Program:

- Departmental application
- Official GRE score report (subject test report recommended)
- Official TOEFL score (if applicable)

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- 3 letters of recommendation (use the graduate school online application system)
- Personal statement
- 1 official copy of each college transcript where a degree was earned or is pending

Degrees Offered

PhD in psychology, with emphasis areas in clinical psychology, cognition and neuroscience, developmental psychology, quantitative psychology and social/personality psychology, as well as a dual program in child clinical and developmental psychology.

Clinical Psychology Emphasis

The clinical psychology program is accredited by the American Psychological Association and is a member of the Academy of Psychological Clinical Science. The clinical program follows a clinical science model of training. Central to this model is a commitment to: (a) using an empirical approach to understanding, ameliorating, and preventing human problems in behavior, affect, cognition, and health; (b) to promoting adaptive human functioning; and (c) to disseminating and applying knowledge in ways consistent with scientific evidence.

The clinical program prepares students for careers involving support, production, and dissemination of clinical science research. Clinical faculty and students are active in research and scholarship that advances understanding of the symptoms, causes, course, treatment, and prevention of many of our nation's most distressing and impairing mental/behavioral health issues (e.g., addictions, anxiety, developmental disorders, eating disorders, juvenile delinquency, mood instability and disorders, schizophrenia). Students work primarily with core clinical faculty, but may also collaborate with researchers throughout the department and in other campus and community units (e.g., Thompson Center for Autism and Developmental Disabilities, Fulton State Hospital).

Students also develop clinical skills in empirically supported approaches to assessment, prevention and intervention. The clinical program maintains its own community-based outpatient clinic (the Psychological Services Clinic or PSC) as a practicum training site for students in the clinical program. The PSC is staffed by doctoral-level clinical psychologists and clinical graduate students, and it serves a broad range

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of clients through individual, couple, family, and group assessment and therapy services. Additional clinical experiences are available through paid or volunteer positions at institutions such as Fulton State Hospital, University Hospitals and Clinics, the Thompson Center, and the Boone County Juvenile Office's Multisystemic Family Therapy Program.

After completing high quality internships, typically at medical centers, VAs, or university research centers, graduates are employed in positions that involve research, teaching and service in universities, medical centers, clinics, hospitals and similar agencies.

Cognition and Neuroscience Emphasis

Cognition and Neuroscience training provides students with a thorough background in the content areas of psychology, statistics and scientific methodology, through course work and, more importantly, through participation in ongoing research. Students are expected to be actively engaged in research throughout their graduate training.

Faculty in Cognition and Neuroscience investigate a variety of topics in cognitive psychology, electrophysiology, and neuroimaging including selective attention, motor processing; memory; brainstem reflexes; blindsight; brain correlates of true and false memories; language; neuropharmacology and drug abuse; Parkinson's disease and many other topics.

Within cognitive psychology, our researchers investigate human learning in auditory and speech perception; immediate memory and attention; skill acquisition; individual differences in human memory and intelligence; numerical cognition; implicit learning and memory; false memory; human covariation judgment. Developmental work is being done on memory and aging; intellectual development in adulthood and memory for speech in children. Animal learning studies investigate memory retrieval processes in animals; extinction; the role of context in conditioning; and drug effects.

Developmental Psychology Emphasis

Developmental psychology is the scientific study of social, cognitive, and physical development over time. The Developmental Psychology doctoral program offers a strong background in statistics and research methodology and intensive research mentoring. Graduate students

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engage in research with their primary advisor beginning in their first semester in the program and take supporting coursework.

Quantitative Psychology Emphasis

The goal of the PhD program with emphasis in Quantitative Psychology is to produce researchers who are able to develop, evaluate, and apply advanced methodological techniques to psychological research questions. The program offers considerable diversity in faculty research and coursework offerings; our substantive interests span clinical, social, health, developmental, and cognitive psychology. Quantitative areas of expertise cover a range of linear and non-linear approaches to modeling, as well as meta-analysis, time series, state-space models, and issues in large-scale data management.

Students in Quantitative Psychology complete coursework in mathematical statistics, experimental design, and measurement, as well as courses in quantitative methods. Students can acquire extensive experience as statistical consultants through specific coursework in statistical consultation. Program requirements are fairly flexible, and students with particular interests in a substantive area of psychology are encouraged to take advanced courses in that area. Quantitative course offerings focus both on classic analytic methods as well as advanced techniques such as structural equation modeling, multilevel modeling, and meta-analysis.

Strong ties exist between the Department of Psychological Sciences and the Statistics Department, and students may opt to complete a Masters Degree in Statistics as they progress through the PhD program. In addition, students have the opportunity to gain experience as statistical consultants through specific coursework in this area.

On-going projects conducted by the faculty include research in meta-analytic and secondary analysis techniques, structural equation modeling, particularly as applied to longitudinal models of change and growth, multilevel modeling, and mathematical and statistical models of cognition and perception.

Social/Personality Psychology Emphasis

Social/Personality Psychology offers training in the traditional areas of social and personality psychology, as well as their relevance for several

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applied areas including health psychology. This Social/Personality area integrates the psychology of the person and the situation, with the goal of understanding the psychological processes that underlie people's emotions, motivations, beliefs, and actions.

Training focuses on the multi-faceted view of social behavior from three levels: (1) the individual level; (2) the contextual level (or social level); and (3) the interaction of the individual and the contextual levels. All three levels are vital to fully understanding human psychology. Particular research foci in the area include the sources of motivation, both individual and social; the nature of meaning-making, both existential and interpersonal; the determinants of optimal and destructive functioning, both within and between groups and in relationships; and the causes and consequences of psychological well-being, growth, and defense.

From the first year, students will be actively involved in their advisor's ongoing research program. The exact nature of this involvement will be determined by the interests and needs of both parties, and may entail attending research meetings, designing research studies, running subjects, analyzing data and/or writing research reports. This hands-on research experience in conjunction with completing coursework and other program requirements is intended to provide the student with a firm grounding in the theory and methods of social/personality psychology, as well as the skills to conduct and publish his or her own research.

Dual Emphasis Program in Child Clinical and Developmental Psychology

Students in the Dual Emphasis Program pursue a graduate degree with training in both clinical (child track) and developmental psychology. Students in this program are involved in training that bridges the two areas of developmental psychology and child-clinical psychology. This program provides training in the area of developmental psychopathology with the added benefit of training in the practice of child-clinical psychology. To pursue the joint program, students must be officially admitted into both the clinical and developmental training areas within the Department of Psychological Sciences and complete requirements for both areas.

More Information about Emphasis Areas

These programs and others are more fully described at the departmental website at http://psychology.missouri.edu.

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PhD Degree Requirements

The PhD qualifying examination requirement is satisfied by successful completion of the MA degree. A master's degree with an empirical thesis is required for doctoral study. The master's with thesis is typically completed as part of a student's normal progress through the doctoral program.

Students with Degrees from Other Universities

Students who enter the doctoral program with a master's (thesis) degree from another university can satisfy the MA requirement at this university by having their thesis and course work approved by a three-member thesis committee. The committee must be composed of one faculty member from the student's training area, one faculty member from another training area, and one MU faculty member from outside the department. Those entering the department with a master's degree obtained without an empirical thesis may meet this requirement by conducting an investigation under the supervision of their adviser and having the resulting thesis approved by a three-member committee with the composition identified above.

Plan of Study

General requirements for the PhD include nine hours of distribution courses, 11 hours in statistics, 24 hours in the area of concentration, other elective courses, and research. Students must earn 83 hours to graduate with the PhD. Practica, internship and additional course work are required for the clinical program. Other requirements include a dissertation and comprehensive and final oral examinations. More detailed information about the rules and regulations for degree completion can be found in the Department of Psychological Sciences Graduate Student Handbook.

Courses

See Psychology (PSYCH) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Public Affairs Graduate Programs

Contact Information

Harry S Truman School of Public Affairs
101 Middlebush Hall, Columbia, Missouri 65211
573-884-1656
Email: truman@missouri.edu
Web: http://www.truman.missouri.edu

About the Harry S Truman School of Public Affairs

The Harry S Truman School of Public Affairs offers master and doctoral degrees in the theory and practice of public and nonprofit management, public policy, and organizational change. MPA students are prepared for careers in a new public service that spans government, nonprofit, and private sectors. PhD students are trained for careers in academic and research institutions.

Degrees Offered

- Master of Public Affairs (MPA)
- Cooperative Dual Degrees: MPA and JD; MPA and MPH
- Doctor of Philosophy in Public Affairs (PhD)

Public Affairs Faculty

Barton Wechsler
professor and director, Truman School of Public Affairs, PhD, The Ohio State University.

Guy B. Adams
professor, Truman School of Public Affairs, DPA, George Washington University.

Georgeanne Artz
assistant professor of agricultural economics and public affairs, PhD, Iowa State University.

Brian Dabson
research professor and associate director, Rural Policy Research Institute, M.S.S., University of Birmingham, England.

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Michael A. Diamond
professor and associate director for academic programs; director, Center for the Study of Organizational Change, PhD, University of Maryland.

Charles W. Fluharty
research professor and director, Rural Policy Research Institute, MDiv, Yale University.

Christopher Fulcher
research assistant professor, PhD, University of Missouri.

Jason Grissom
assistant professor, PhD, Stanford University.

Kristofer Hagglund
professor and associate dean, School of Health Professions, PhD, University of Alabama-Birmingham.

Colleen Heflin
assistant professor, PhD, University of Michigan.

Thomas G. Johnson
Frank Miller Professor of agricultural economics and professor of public affairs; director, Community Policy Analysis Center, PhD, Oregon State University.

Lael Keiser
associate professor of political science and public affairs, PhD, University of Wisconsin-Milwaukee.

David M. Konisky
assistant professor, PhD, Massachusetts Institute of Technology.

Jeffrey D. Milyo
professor of economics and public affairs, PhD, Stanford.

Jill Nicholson-Crotty
assistant professor, PhD, Texas A&M University.

continued on next page

Sean Nicholson-Crotty
assistant professor of political science and public affairs, PhD, Texas A&M University.

Michael Podgursky
professor of economics and public affairs, PhD, University of Wisconsin-Madison.

Lilliard E. Richardson Jr.
professor, PhD, University of Texas-Austin.

Charles L. Sampson
associate professor, PhD, University of Pittsburgh.

James K. Scott
associate professor and director, European Union Center, PhD, University of Missouri.

Judith Stallmann
professor of agricultural economics, rural sociology and public affairs, PhD. Michigan State University.

David C. Valentine
research associate professor; senior policy analyst, Institute of Public Policy, PhD, University of Missouri.

Lee Wilkins
professor of journalism and public affairs, PhD, University of Oregon.

Lisa A. Zanetti
associate professor, PhD, University of Tennessee.

Master of Public Affairs

About the Master of Public Affairs Program

MU Truman School of Public Affairs students study with outstanding faculty, who are talented teachers as well as active, nationally recognized scholars. Policy forums, round-tables with policy makers, lectures by distinguished visiting scholars, and research symposia also enrich student learning. Small classes taught both on campus

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and in Jefferson City, the state's capital, make for a lively learning environment. The Truman School MPA program provides a balance of public service values, interpersonal and analytic skills, and a thorough knowledge of administrative and policy processes.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Contact the Truman School at (573) 884-1656 or http://www.truman.missouri.edu for details.

Application and Admission Information

Admission to the Master of Public Affairs Program

Contact Information
Dr. Michael A. Diamond, Associate Director for Academic Programs
101 Middlebush Hall, Columbia, Missouri 65211
573-884-1656

Admission Criteria

- Fall deadline: Priority admission and funding consideration are given to applications received by February 1. Applications submitted after February 1 will be considered, with preference going to those received by May 1. Prospective students applying after May 1 will be considered for fall admission on a case by case basis.
- Assistantship/Fellowship deadline: February 1
- Minimum TOEFL score: 550/213/79 (paper/computer/Internet)
- Minimum GRE score: Preferred V+Q=1000
- Minimum GPA: 3.0 in last 60 hours
- Admission to the MPA program is competitive and open to students holding baccalaureate degrees from accredited institutions and meeting admissions standards of the Truman School of Public Affairs and the Graduate School.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Truman School MPA Program:

- Departmental application

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- 3 letters of recommendation (use form provided by department)
- GRE score report (GRE alternatives accepted: LSAT scores will be considered)
- Résumé
- Statement of interest

Degree Requirements
Consisting of 45 hours of graduate work, the MPA program includes a core (24 hours), an area of specialization (18 hours) and an internship (3 hours). The five areas of specialization are:

- Nonprofit Management
- Organizational and Community Change
- Public Management
- Public Policy
- Regional Development

Students with significant public service experience may have the internship waived, making the MPA program 42 hours for them. The MPA's Mid-Career option is available to students with 3-5 years of public service experience.

Internship
During the summer after their first year in the program, students without significant public sector work experience are required to complete a public service internship. Interns apply what they have learned during the first year in the program, plus they gain practical experience that enables deeper learning during second-year classes.

About the PhD Program in Public Affairs

The Harry S Truman School of Public Affairs at the University of Missouri offers an interdisciplinary PhD in Public Affairs that prepares graduates for careers in universities, colleges and applied research settings in the public, private and nonprofit sectors. Students complete core sequences in public policy and management as well as research methods, and specializations tailored to students' research interests. For more information, please contact Dr. Michael Diamond, Associate Director for Academic Programs, (573) 884-1656, truman@missouri.edu.

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Public Management Graduate Certificate

Contact Information

Harry S Truman School of Public Affairs
101 Middlebush Hall
573-884-1656
http://truman.missouri.edu/prospectivestudents/certificates.asp

About the Public Management Certificate Program

The graduate certificate in public management encompasses administrative skills for ethical, effective leadership and management roles in the public service. Students completing this Graduate Certificate will be well positioned to begin or advance a public service career with many expecting to pursue management careers in state and local governments.

Eligibility

Students do not need to be enrolled in a graduate degree program at MU to participate.

Plan of Study

Students must complete 12 credit hours to receive the certificate.

Required Public Management Certificate Courses

The first two courses are required along with one of the remaining two:

- Public Affairs 8510: Public Budgeting and Taxation
- Public Affairs 8520: Human Resources Management and Development in the Public and Nonprofit Sector
- Public Affairs 8530: Strategic Planning and Performance Measurement, or
  Public Affairs 8540: Local Government Management
- Elective Course

Elective Courses

The fourth course is an elective chosen in consultation with the certificate director from among the courses offered by the Truman School or by another graduate unit at MU.

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Nonprofit Management Graduate Certificate

Contact Information

Harry S Truman School of Public Affairs
101 Middlebush Hall
573-884-1656
http://truman.missouri.edu/prospectivestudents/certificates.asp

About the Nonprofit Management Certificate

The Graduate Certificate in Nonprofit Management provides students with the managerial, fiduciary, and analytical tools necessary for leadership of nonprofit entities. The goal is to develop and hone skills that can be used to achieve organizational missions uniquely aimed at serving the interests of the community.

Eligibility

Students do not need to be enrolled in a graduate degree program at MU to participate.

Careers

As one of the fastest growing sectors in today's economy, nonprofit organizations have undergone a professionalization in management, with board members changing their orientation from one of personal networks to a bottom-line, information-based outlook. Successful nonprofit organizations today thrive on their ability to compete effectively in the marketplace, read community needs and priorities, and deliver appropriate services within budget.

Plan of Study for the Nonprofit Management Certificate

Students must complete 12 credit hours to receive the certificate.
Required Courses:

- Public Affairs 8710: The Nonprofit and Voluntary Sector
- Public Affairs 8720: Financial Management in the Public and Nonprofit Sector
- Public Affairs 8520: Human Resource Management and Development in the Public and Nonprofit Sector

Elective Courses

One elective course may be chosen from among Truman School courses, or in consultation with the certificate director, from any graduate course related to the certificate topic in another MU graduate department.

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Organizational Change Graduate Certificate

Contact Information

Harry S Truman School of Public Affairs
101 Middlebush Hall
573-884-1656
http://truman.missouri.edu/prospectivestudents/certificates.asp

About the Certificate

The Graduate Certificate in Organizational Change is a multi-disciplinary and multi-sector approach to the theory and practice of transforming organizations and communities in a technologically advanced and global economy. Students will have an opportunity to develop knowledge and competencies appropriate to the advanced study and diagnosis of evolving and emerging organizations and communities in the public, private, and nonprofit arena. They will find a curriculum supportive of careers in academics, management, and consulting.

Eligibility

Students do not need to be enrolled in a graduate degree program at MU to participate in the program.

Plan of Study

Students must complete 12 credit hours to receive the certificate.
Required Courses:

- Public Affairs 8610: Group Dynamics and Conflict Resolution
- Public Affairs 8620: Organizational Analysis and Change
- Public Affairs 8630: Organizational Change in a Community and Global Context

Elective Courses

The fourth course is an elective chosen in consultation with the certificate director from among the courses offered by the Truman School or by another graduate unit at MU.

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Science and Public Policy Certificate

Contact Information

Harry S Truman School of Public Affairs
101 Middlebush Hall
573-884-1656
http://truman.missouri.edu/prospectivestudents/certificates.asp

About the Certificate

The public policy specialization offers students a strong foundation in the skills necessary to work effectively in the policy environment. Students in the public policy specialization learn theories of the policy process, quantitative and qualitative research methods to analyze policy, and program evaluation. Students also have the opportunity to gain expertise in specific policy areas including education policy, environmental policy, health policy, social policy, and regional development policy.

Eligibility

Students do not need to be enrolled in a graduate degree program at MU to participate in the program.

Plan of Study

Students must complete 12 credit hours to receive the certificate.
Required Courses:

- Public Affairs 8170: Public Policy Processes and Strategies
- Public Affairs 8430: Public Policy Analysis
  and either
- Public Affairs 8171: Environmental Policy, or
- Public Affairs 8172: Health Policy

Elective Courses

The fourth course is an elective chosen in consultation with the certificate director from among the courses offered by the Truman School or by another graduate unit at MU.

Courses

See Public Affairs (PUB AF) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Public Health Degrees

About the Different Public Health Graduate Programs at MU

The University of Missouri offers two very different degrees in public health. Family & Community Medicine offers a Master of Science (MS) (below) and Public Health offers a Master's of Public Health (MPH) with degree concentrations of Health Promotion and Policy, and Veterinary Public Health (click here for the MPH degree description).

Master of Science in Public Health: Family and Community Medicine

Contact Information

School of Medicine
M224 Medical Sciences Building, DCO32.00
573-884-7060

About the Program

The Department of Family and Community Medicine has responsibilities for teaching, research and service activities covering the spectrum from primary medical care to community medicine.

This graduate degree program is designed to prepare primary care physicians to work in an academic setting as faculty members with responsibilities for patient care, teaching, research, and scholarly endeavors. Applicants must be graduates of an accredited medical school, U.S. citizens or permanent residents and licensed to practice in a primary care specialty.

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Faculty

Jeffery Belden
associate professor of clinical family and community medicine, MD, Southern Illinois University

Robert L. Blake Jr.
William C. Allen Professor Emeritus of family and community medicine, MD, Washington University - St. Louis.

James D. Campbell
professor, PhD, University of Missouri.

Jack M. Colwill
professor emeritus, MD, University of Rochester.

David Cravens
associate professor of clinical family and community medicine, MD, MSPH, University of Missouri.

Kevin Everett
associate professor, MA, PhD, Louisiana State University

Anne B. Fitzsimmons
assistant professor of clinical family and community medicine, MD, University of Missouri.

Elizabeth Garrett
professor of clinical family and community medicine, MD, MSPH, University of Missouri.

Linda A. Headrick
professor, senior associate dean for education and faculty development, MD, Stanford University.

Kimberly Hoffman
research assistant professor, associate dean of education evaluation, PhD, University of Missouri.

Michael C. Hosokawa
professor, director of graduate studies, EdD, University of Oregon.

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Debra Howenstine
assistant professor of clinical family and community medicine, MD, University of Missouri.

Kevin Y. Kane
associate professor of clinical family and community medicine, MD, Creighton University.

Julie Kapp
assistant professor, PhD, St. Louis University.

James J. Kinderknecht
clinical assistant professor, MD, University of Missouri-Kansas City.

Karl Kochendorfer
assistant professor of clinical family and community medicine, MD, University of Illinois-Chicago.

Peter Koopman
assistant professor of clinical family and community medicine, MD, University of Pittsburgh.

Richelle Koopman
assistant professor, MD, MS, University of Pittsburgh.

Robin L. Kruse
research associate professor, PhD, State University of New York.

Michael LeFevre
professor, associate chair, MD, MSPH, University of Missouri.

Joseph W. LeMaster
associate professor, MD, MPH, University of Kansas.

Erik J. Lindbloom
associate professor, fellowship director, MD, MSPH, Northwestern University.

Jane McElroy
assistant professor, PhD, University of Wisconsin-Madison.

continued on next page

David R. Mehr
professor, MD, MS, University of California-San Francisco.

David Oliver
research professor, assistant director of MU Interdisciplinary Center on Aging, PhD, University of Missouri.

Debra Parker-Oliver
associate professor, PhD, University of Missouri.

Carin Reust
assistant professor of clinical family and community medicine, MD, University of Missouri.

Erika Ringdahl
professor of clinical family and community medicine, MD, University of Iowa.

William Steinmann
professor of internal medicine, MD, University of Missouri School of Medicine.

Jim Stevermer
associate professor of clinical family and community medicine , MD, MSPH, Washington University - St. Louis.

Sarah Swofford
assistant professor of clinical family and community medicine, MD, University of Missouri.

Paul Tatum III
assistant professor of clinical family and community medicine, MD, University of Texas Health Science Center.

Daniel C. Vinson
professor, MD, MSPH, University of North Carolina.

Jack Wells
assistant professor of clinical family and community medicine, MD, Ross University, Dominica, West Indies.

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Dennis Wen
associate professor of clinical family and community medicine, MD, East Carolina School of Medicine.

Adam Whaley-Connell
assistant professor of internal medicine, DO, Kansas City University of Medicine.

Harold A. Williamson
professor and vice chancellor for health sciences, professor, MD, MSPH, Case Western Reserve University.

Lynn Wung
assistant professor of clinical family and community medicine, MD, Northwestern University.

Steven C. Zweig
professor and chair of family and community medicine, MD, MSPH, University of Missouri.

Admission Contact Information

Ashley Winston
One Hospital Dr, MA303; Columbia, MO 65212
573-884-7060

Admission Criteria

- Board-certified/board-eligible primary care physicians
- Deadline for Fall entrance: Call for deadline dates
- Minimum TOEFL score: 500/173

Required Application Materials

To the Graduate School:
All required Graduate School documents

To the Program (call for application):

- 3 letters of recommendation
- Departmental application
- Personal statement
- CV or résumé

continued on next page

- Verification from medical school and residency program
- Official transcripts

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Plan of Study

The graduate program leading to the master of science includes a combination of course work, research and field experience. Courses cover areas such as research methods, epidemiology, biostatistcs and learning theory.

The program requirements include 30 hours of graduate course work and the completion of scholarly project.

Courses

See Family and Community Medicine Public Health (P_HLTH) graduate courses in the myZou online system.

END OF THE PUBLIC HEALTH: FAMILY AND COMMUNITY MEDICINE MS SECTION.

PLEASE CONTINUE TO THE NEXT PAGE FOR THE PUBLIC HEALTH: MASTER OF PUBLIC HEALTH PROGRAM IN THIS PUBLIC HEALTH CATALOG DESCRIPTION.

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Public Health: Master of Public Health (MPH) Graduate Program

Master of Public Health (MPH) Graduate Program
(Administered by the MU Graduate School)

Contact Information

802 Lewis Hall
573-884-6844
http://publichealth.missouri.edu/

About the Master of Public Health

The Master of Public Health (MPH) is the standard professional degree recognized throughout the world for public health practice. The MPH program at the University of Missouri trains practitioners, teachers, researchers, and administrators to plan, implement, and evaluate programs aimed at enhancing health in human populations through organized effort on the local, state, and national level.

All public health students are educated in the core domains of public health and participate in a supervised internship in a public health agency. The combination of course work and practical experience produces individuals who are highly qualified to enter the public health workforce.

The MPH curriculum is drawn from a variety of collaborating academic programs and units. Public health coursework reflects the University of Missouri's strength in the Health Professions, Social Work, Nursing, Medicine, Veterinary Medicine and Arts and Sciences.

Degrees

The MPH is available in two emphasis areas:

- Health Promotion and Policy
- Veterinary Public Health

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Two dual degrees are also offered:

- A dual DVM/MPH degree allows students to complete both programs in a little over four years.
- A dual MPA/MPH degree - The Harry S Truman School of Public Affairs and the MU Public Health Program offer a combined program in which the student may earn a Master of Public Health (MPH) and a Master of Public Administration (MPA). This course of study is designed specifically to integrate advanced public affairs and administration practice with population-based public health knowledge and skills. The linkage of public affairs practice with public health will improve the delivery of both public administration and public health services in a variety of situations and settings. With the joint degree, students acquire complementary skills, knowledge, and perspectives of both disciplines. Graduate work in public administration equips students with advanced mastery of policy theory and practice, while public health training provides a population-based, multi-disciplinary team perspective.

Thesis Option

The Master's Thesis (P_HLTH 8090) requires independent research aimed at discovery and/or development of elements or relationships derived from a public health theory. A formal written report using guidelines established by the MU Graduate School is required. P_HLTH 8980 Masters Thesis Research enables the student to use the research process in a systematic inquiry of elements and relationships within public health theory. MU Graduate School Guidelines for the Thesis Process is available at http://gradschool.missouri.edu/policies/masters/requirements/thesis-process.php.

The Master's Thesis Project provides students with the opportunity to:

- generate a research question within a theory,
- formulate and implement a research design, and
- make recommendations for replication, revisions, or future investigations.

Certificate

Graduate Certificate in Public Health

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Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Public Health (MPH) Associated Faculty

Kristofer Hagglund, Program Director

- Dr. Brenda Beerntsen, Veterinary Pathobiology
- Dr. Constance Brooks, Nursing
- Dr. Wade Davis, Biostatistics Group
- Dr. Robert DeGraaff, Health Management and Informatics
- Dr. Michael Diamond, Truman School of Public Affairs
- Dr. Mark Ellersick, Statistics
- Dr. Subharup Guha, Statistics
- Dr. Michael Hosokawa, Family and Community Medicine
- Dana Hughes, Institute of Public Policy
- Dr. Deb Hume, Public Health
- Dr. Julie Kapp, Family and Community Medicine
- Dr. Suh Won Lee, Statistics
- Dr. Kay Libbus, Nursing
- Dr. Jane McElroy, Family and Community Medicine
- Dr. Sean Nicholson-Crotty, Truman School of Public Affairs
- Dr. Vickie Osborne, Social Work and Public Health
- Dr. Youngju Pak, Statistics
- Dr. Patrick Pithua, Veterinary Medicine and Surgery
- Dr. Chada Reddy, Veterinary Medicine
- Dr. Shamini Rogers, Public Health
- Dr. Marjorie Sable, Social Work
- Dr. Loren Schultz, Veterinary Medicine and Surgery
- Dr. Paul Speckman, Statistics
- Dr. George Stewart, Veterinary Pathobiology
- Dr. ManSoo Yu, Social Work and Public Health

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MPH Application and Admission Information

Admission Contact Information

Katherine Kirkpatrick (kirkpatrickkl@missouri.edu)
802 Lewis Hall
Columbia, MO 65211
573-884-6844

Admission Criteria

Fall deadline: June 30

- Minimum TOEFL score: 550/215/80 (paper/computer/internet); IELTS 6.0
- Minimum GRE score: not set
- Minimum GPA: 3.0 in last 60 hours

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Master of Public Health Program:

- Personal data sheet
- Official transcripts
- Personal essay
- Résumé or CV
- 2 letters of recommendation
- GRE score report (Other qualifying exams for advanced degrees will be considered, including the LSAT, MCAT and GMAT.)

An interview (either on-campus or by telephone) with program faculty may be requested.

Please note also that the committee may waive the GRE requirement, the English competency examination and/ or the grade point requirement for applicants who have either completed or are currently enrolled in a graduate or professional degree program such as DVM, MD or Nursing. Applicants should include any waiver request on their application.

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Graduate Certificate in Public Health

Admission

Students wishing to pursue a Graduate Certificate in Public Health complete the MU Graduate School's online application (standardized test scores are not required). Certificate candidates must provide the MPH Program's Personal Data Sheet and official transcripts to the MPH Program.

About the Certificate

This 12-credit-hour program provides students with the core public health education that they need to enhance their professional knowledge. The certificate program includes the following courses:

- Principles of Public Health
- An approved Health Statistics course
- Human Health and the Environment, Social and Behavioral Sciences in Public Health or Epidemiology
- One approved elective

Applying to the Graduate Certificate Program

Students who complete the Graduate Certificate in Public Health with a minimum grade of B in each of the four courses will be recommended for admission to the Master of Public Health (MPH) program should they wish to continue their studies. The course credits earned for the Graduate Certificate will be credited toward the MPH degree.

Courses

See the Master of Public Health (P_HLTH) graduate courses in the myZou online system.

END OF PUBLIC HEALTH DEGREES PROGRAM DESCRIPTIONS.

Religious Studies Degree Program

Contact Information

College of Arts and Science
221 Arts & Science Bldg.
573-882-4769
http://religiousstudies.missouri.edu/

About Religious Studies

Religious studies seeks to understand the role of religion in human life and culture. The department's field of study includes religious expression from all cultures and in every period of history. The master's program in religious studies is designed to achieve two goals that reflect the distinct educational aims of two different kinds of students. The first goal is preparation of students for PhD programs. Increasingly, doctoral programs in religious studies expect applicants to have a master's or similar advanced degree. The degree is designed to prepare students for entry into such programs. It therefore emphasizes appropriate language study, the recognized, scholarly approaches to the study of religion, history of the discipline, research methods, and knowledge of the range of religious experience and expression. The second goal is to provide graduate study of religions for those who desire it in order to enrich their educational lives, to prepare for seminary study, or to strengthen work in other allied disciplines, such as journalism, education, history, literature, anthropology, or art history.

Degree Offered

Master of Arts in Religious Studies

Financial Aid from the Program

Fellowships are offered through the Graduate School. Teaching assistantships which include a stipend and tuition remission are available, on a competitive basis, to both entering and advanced master's degree candidates.

George M. Landes Graduate Travel Fund

The George M. Landes Graduate Travel Fund was established to support travel expenses incurred by graduate students as part of their course

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of study. Typically, funds are allocated to help defray the costs of travel to conferences where students present papers, or of research trips to archives and field locations. Applications can be submitted at any time and should be directed to the Director of Graduate Studies. The size and number of disbursements depend on available funds and the number of pending applications. Decisions about awards from the travel fund are made collectively by the department's faculty. The travel fund is made possible through the generosity of George Miller Landes, Davenport Professor Emeritus of Hebrew and the Cognate Languages, Union Theological Seminary, New York.

Community Service Scholarship
The department awards one or two $250 scholarships each year to students who have demonstrated a commitment to public service. Majors, minors, and master's degree students are eligible. Nomination forms are available at the department office (email: rsinfo@missouri.edu). A gift from Elizabeth MacKenzie allowed the department to establish this award.

Religious Studies Faculty

Robert Baum
chair, associate professor, PhD, Yale University.

Richard Callahan
assistant professor, PhD, University of California, Santa Barbara.

Signe Cohen
associate professor, PhD, University of Pennsylvania.

Nate DesRosiers
assistant professor, PhD, Brown University.

Edward Drott
assistant professor, PhD, University of Pennsylvania.

Rabia Gregory
assistant professor, PhD, University of North Carolina at Chapel Hill.

Jill Raitt
professor emerita, PhD, University of Chicago.

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Application and Admission Information

Admission Contact Information

Prof. Signe Cohen
221 Arts & Science Bldg
Columbia, MO 65211
573-882-4760

Admission Criteria

- Fall deadline: February 1 (for consideration of financial aid)
  April 1 (for students not seeking financial aid)
- Spring deadline: October 15
- Minimum TOEFL score: 550/213 (paper/computer)
- Minimum GRE score: none set
- Minimum GPA: 3.0 Required Application Materials

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Religious Studies MA Program:

- Departmental application
- 3 letters of recommendation (use departmental form)
- GRE score report

Degree Requirements

The MA degree requires at least 30 credit hours of graduate study, of which 24 are to be taken in residence. The program allows considerable latitude for different courses of study and expects that each student will work out an appropriate selection of courses in consultation with a member of the department.

The normal expectation in the Department of Religious Studies is that a full-time graduate student in the MA program will complete the degree in two years. A student's progress, therefore, will be measured according to this standard. The M-1 Program of Study form and the M-2 Request for Thesis Committee form must be filed by the end of the second semester of study. Full-time graduate students who exceed or expect to exceed two years to complete will be asked to file a plan and schedule for the completion of the degree before the end of the second

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year. This plan requires the approval of the student's adviser, the chair of the department, and the director of graduate studies. Should the student's adviser also be either the chair or DGS, then this plan requires the signature of one additional faculty member. The department will normally not grant extensions beyond a third year. Within the first year, a part-time student should submit a plan and schedule for completion of the degree for approval by the student's adviser, the chair, and the director of graduate studies. That plan may be adjusted with the consent of the adviser, chair, and DGS.

Plan of Study

A core curriculum explores subjects that are fundamental to the study of religion and is required of all graduate students. The program requires that graduate students take a course in the methodologies of religious studies or demonstrate competence in this area, normally by demonstrating that they have taken an equivalent course elsewhere. Each fall, the department offers a course on Modern Perspectives in the Study of Religion that partially satisfies this requirement. Beginning with graduate students who begin their studies in the fall semester of 2009, competence in theory and method in the study of religion must be demonstrated by successfully completing a comprehensive examination in this area.

In addition, the degree requires a sequence of three courses that examine the major forms of religious expression and religious action and teach students how scholars in the field have approached them. These three courses are in the following areas:

Religious Texts and Interpretation-Courses 8200-8299

These courses will be a close examination of a canonical or foundation text and its role in the religious traditions in which it is authoritative. The course will consider both the traditional interpretations and appropriations of the text and contemporary methods of interpretation. The goal of the course is to understand and to use the fundamental tools of textual interpretation. The specific course topic will vary each semester.

Religious History-Courses 8400-8499

These courses will study the life of a religious community in its geographical and historical specificity. The goal of the course is to learn

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how to examine a particular religious community within its cultural, social and historical contexts. The special course topic will vary each semester.

Comparative Religion-Courses 8600-8699
These courses will study points of contact or comparison within or among Asian, Western and Indigenous traditions. Topics may include religious issues common to various religions, problems of understanding and inequities of power in the encounter of religious traditions, and phenomenological categories of religion, such as sacred time or space. The goal of the course is to understand the methods and issues in the comparative study of religion. The special course topic will vary each semester.

In addition to these core requirements, students will take course work or be able to show competence in one or more of the religious traditions of Asia, of the West and of Indigenous peoples. Core courses may be used to demonstrate competence.

Appropriate language study to area of emphasis
The department requires students to acquire a working knowledge of one language in addition to English during the master's program. The language should help the student work with primary sources or with scholarship in a field of special interest. Working knowledge may be demonstrated in three ways: (1) 3 credits of intensive language study, (2) 6 credits of undergraduate language study, and (3) a reading exam administered by the department faculty. Students who are considering going on to doctoral studies are encouraged to work on a second language as well.

If an exception to the language requirement is appropriate due to the background of a student, the student may request that the requirement be waived. The request must be submitted to the director of graduate studies by the end of the second semester of graduate study. The director of graduate studies will present the request to the department faculty for a decision.

Area of Emphasis
When they apply to the program, master's students will designate an area of emphasis and, when they enter it, much of their course work will reflect the area they choose. The areas in which the department offers

continued on next page

work are the following:

- American Religious History
- Biblical Studies
- History of Christianity
- Religion and Society
- Religions of East Asia
- Religions of Indigenous Peoples
- Religions of South Asia
- Women and Religion

Although the department is committed to providing faculty resources in each of these areas, prospective students should contact the department concerning their specific interests. Once an area of emphasis has been determined, the student will work with the faculty adviser to determine what other courses both within and outside the department might be required. By the end of the student's second semester s/he will complete and submit a Program of Study (M-1 Form) [in pdf] and will assemble a thesis or portfolio committee (M-2 Form) [in pdf], which is normally composed of two faculty members from the department and one member from outside.

Master's Thesis or Portfolio
The culminating requirement in the master's program is a master's thesis or portfolio. Each student will write a substantial thesis or collect a portfolio of papers that demonstrates the ability to do independent research, the capacity to advance the bounds of knowledge in religious studies, proficiency in the appropriate linguistic and analytic skills necessary to the student's area of emphasis, and specialized knowledge of the area of emphasis. Should the student choose to submit a portfolio, the papers should reflect a common theme or common area of study. Students may take up to six credit hours of guided research in their preparation of a master's thesis or portfolio.

Courses

See Religious Studies (REL ST) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Responsible Conduct of Research – Dean's Certificate

Contact Information

Graduate School
210 Jesse Hall
573-882-6311
http://gradschool.missouri.edu/programs/responsible-conduct-research/

About the RCR Certificate

The Responsible Conduct of Research (RCR) program has been offered the MU Graduate School since 2005, and is part of a national initiative headed by the Council of Graduate Schools. Through MU's RCR program, students may take courses and earn a dean's graduate certificate in RCR. Part of a growing national emphasis within and beyond the academy, RCR participation is increasingly important: a certificate helps graduates demonstrate that they are dedicated to ethical research principles and practice.

Student Outcomes

- Provides training in the responsible conduct of research
- Promotes integrity in the research process
- Provides information about current and upcoming regulations and certifications necessary to conduct do research as an informed investigator

Minimum Requirements

- 1-hour course, GRAD 9001, Topics in Grad School: Introduction to the Responsible Conduct of Research
- 3-hour course addressing the responsible conduct of research in the context of specific disciplinary issues (below)
- Completion of assessments of skills and perceptions of the program

Required Course

GRAD 9001 Topics in Grad School: Introduction to the Responsible Conduct of Research
[For more information, contact Dr. Alan Strathman]

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Discipline-Specific Course Options

- Psychological Sciences 8910: Ethics/Professional Issues
- Nursing 8085: Problems: Nursing Ethics
- Biological Sciences/ Biochemistry 8060: Ethical Conduct of Research
- Veterinary Medicine 8641: Introduction to Research Ethics
- School of Information Sciences and Learning Technologies: Research Integrity
- Journalism 8080: Media Ethics

Application Information

After the student has successfully completed the required course work, complete the online form to indicate completion of requirements.

Awarding of Certificate

The certificate is issued to the student. The certificate does not appear on the academic transcript.

END OF RESPONSIBLE CONDUCT OF RESEARCH CERTIFICATE DESCRIPTION

Romance Languages & Literatures Graduate Programs

Contact Information

College of Arts and Science
143 Arts and Science Building
573-882-4874
http://romancelanguages.missouri.edu/grad.shtml

About the Department of Romance Languages and Literatures

The Department of Romance Languages and Literatures offers graduate degree programs in Spanish, French, and Romance Languages as well as foreign language teaching emphasis. The Department's Faculty and Graduate Student Seminars are an interdisciplinary, interdepartmental series seeking to provide a collegial atmosphere in which scholars can present their recent work. The department strongly encourages study abroad as a way to reinforce language skills, broaden one's horizons, and add an unforgettable experience to a meaningful university education.

The Department of Romance Languages and Literatures of the University of Missouri has the country's only focus area in the field of Afro-Romance Studies. In order to facilitate research collaboration between our faculty members working in this field and scholars outside our institution, we have established the Institute for Languages and Literatures of the African Diaspora. The Institute serves first and foremost to expose black writers of French, Portuguese and Spanish expression to a wider audience.

Degrees Offered

- MA in Spanish
- MA in French
- MA in foreign language teaching (French or Spanish)
- PhD in Romance languages and literatures (French or Spanish)

Financial Aid from the Program

Some programs require an extra form or statement from those who

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wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Romance Languages Faculty

Flore Zéphir
chair, professor of French, PhD, Indiana University-Bloomington. Applied linguistics, foreign language education, sociolinguistics, African diaspora studies.

John Zemke
associate chair and director of graduate studies, professor of Spanish, PhD, University of California-Davis. Medieval Spanish literature, Judeo-Spanish literature, Hispanic oral traditions.

Juanamaria Cordones-Cook
professor of Spanish, PhD, University of Kansas. Contemporary Spanish-American literature, critical theory, Luisa Valenzuela, Nancy Morejón, Afro-Hispanic theater.

Carol Lazzaro-Weis
professor of French and Italian, PhD, University of Pennsylvania. Eighteenth century French literature, contemporary Italian literature, women's narratives, literary history.

Mary Jo Muratore
Middlebush Professor of Humanities, PhD, University of California-Davis. Seventeenth century French literature, dramatic theory, Corneille, Racine, metadrama.

Michael Ugarte
Middlebush Professor of Romance Languages, professor of Spanish, PhD, Cornell University. Eighteenth, nineteenth and twentieth century Spanish literature, cultural studies, literary theory.

Rita Cavigioli
associate professor of Italian, PhD, University of California-Los Angeles. Twentieth century Italian literature.

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Rangira (Béa) Gallimore
associate professor of French, PhD, University of Cincinnati. Francophone literature, theoretical linguistics, twentieth century French literature.

Valerie Kaussen
associate professor of French, PhD, University of California-Santa Cruz. Caribbean and Haitian literature and French cinema.

Charles D. Presberg
Associate professor of Spanish, PhD Harvard University. Spanish literature of the Golden Age, Cervantes, poetics, cultural studies, critical theory.

Asier Alcázar
assistant Professor of Spanish, PhD, University of Southern California. Spanish linguistics.

Carlos Barriuso
assistant professor of Spanish, PhD, Princeton University. Modern and contemporary Spanish literature, transatlantic perspectives, critical theory and film.

Mamadou Badiane
assistant professor of Spanish, PhD, University of Iowa. Afro-Hispanic literature, Afro-Caribbean literature and culture, Négritude and Negrismo.

Erick Blandón
assistant professor of Spanish, PhD, University of Pittsburgh. Hispanic American literature and Central American cultural studies.

Jack Draper
assistant professor of Portuguese, PhD, Duke University. Brazilian literature, music, and popular culture, Latin American cultural studies.

Megan Moore
assistant professor of French, Ph.D. University of Michigan. French Medieval Literature.

continued on next page

Guadalupe Pérez-Anzaldo
assistant Professor of Spanish, PhD, University of California-Irvine. Mexican Literature, Latin American Literature and culture.

Iván Reyna
assistant professor of Spanish, PhD, University of California-Berkeley. Latin American literature, culture, and historiography.

Daniel Sipe
assistant professor of French, PhD, University of Minnesota-Twin Cities. Nineteenth century French literature, critical theory, and French film.

Roberta Tabanelli
assistant professor of Italian, PhD, University of Wisconsin-Madison. Twentieth century Italian literature, contemporary Italian cinema, society and culture.

Nancy Molavi
associate teaching professor of French and Spanish, PhD, University of Missouri. French and Francophone theater, translation.

Kenneth Fleak
assistant teaching professor of Spanish, PhD, University of Missouri.

Stephen Hessel
assistant teaching professor of Spanish, PhD, SUNY-Buffalo.

Dawn Heston
assistant teaching professor of Spanish, coordinator of Spanish 1200, MALT, University of Missouri.

Linda Keown
assistant teaching professor of Spanish, coordinator of Elementary Spanish 1100, MA, Emory University.

Monica Marcos-Llinas
assistant teaching professor of Spanish, PhD, Universitat de les Illes Balears.

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Joseph Otabela
assistant teaching professor of Spanish, PhD, National University for Distance Education.

Alicia Aviles-Quiñones
visiting assistant professor of Spanish, PhD, Tulane University. Latin American Literature and culture.

M. Annice Wetzel
instructor of French, coordinator of Elementary French 1100, 1200 and 2100, MA, Middlebury College.

Application and Admission Information

Admission Contact Information

Mary Harris
143 Arts and Science
Columbia, MO 65211
573-882-5039
http://romancelanguages.missouri.edu/grad.shtml

Department Admission Criteria

- Fall deadline: February 15
- Spring deadline: October 15
- Minimum TOEFL score: 500/173 (paper/computer); 61 Internet Based
- Minimum GPA: 3.0 in field of major
- Masters applicants must have a bachelor's degree; doctoral applicants must have a master's degree.

Applicants must also demonstrate adequate preparation in advanced language and literature courses. This will require their having completed at least four courses equivalent to a 7000-level course at the University of Missouri. At a minimum, three of these courses must be in literature. If the faculty determines a deficiency, they will require that the student complete remedial course work in literature during the first year of enrollment. The director of graduate studies will inform students of these additional requirements at the time of their admission.

Internal doctoral applicants should refer to the application instructions on the doctoral page.

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Required Application Materials
To the Graduate School (Please use Apply Yourself, the Graduate School's online application system)

- All required Graduate School documents
- Official transcript (send to Graduate School at 210 Jesse Hall, University of Missouri, Columbia, MO 65211-1160)
- 10-15 page writing sample in language of desired degree program, must be uploaded to the online application
- 500-word Personal Statement, uploaded to the online application
- 3 letters of recommendation (submitted through Apply Yourself or mailed to the Romance Languages Department, 143 Arts & Science, University of Missouri, Columbia, MO 65211)
- Résumé or CV
- Departmental application at http://romancelanguages.missouri.edu/grad.shtml

Master of Arts in Spanish or French

Language Proficiency Upon Entrance
All graduate students except native speakers of French or Spanish must complete a proficiency examination in their major language at the start of their first academic year. Students whom the faculty deem to be deficient in either their written or spoken grasp of the language will need to undertake remedial work. These students will be reexamined the following year. A second failure on the proficiency examination will terminate a student's eligibility for the MA degree and result in dismissal from the graduate program.

Choosing an Adviser
All graduate students in the department may choose, or the director of graduate studies will assign them, an academic adviser at the start of their first semester of graduate study. Students must choose an academic adviser by the end of their first semester of graduate study.

Plan of Study
The department offers MA degrees in both French and Spanish (Peninsular or Spanish-American literature).

Minors
Students may also elect a minor field of study, which requires a

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minimum of 9 hours of course work completed in another department or other departments. Students interested in such minors should consult the section titled Plan of Study in the Graduate Catalog. These minor fields appear on students' plan of study, but not on their transcript. Students electing minors must complete the standard MA examination in their major field (French or Spanish).

MA Degree Requirements
Students must complete a total of 30 credit hours at the graduate-level to earn their MA degree. At least 15 hours must be in courses at the 8000 level or above. The plan of study for the MA in Spanish must include a minimum of nine hours of course work in Spanish peninsular literature and a minimum of nine hours of course work in Spanish-American literature. The plan of study for an MA in Spanish must also include three credit hours in the history of the Spanish language (completion of Spanish 7711 or the equivalent).

For the MA in either French or Spanish, the total number of credit hours in special readings (7960), problems (8085) or any combination of both may not exceed twelve. The number of credit hours in special readings (7960) within the student's major field may not exceed three per semester. Graduate Instructors with no pedagogical experience or those who have completed no graduate course in foreign language teaching methodology will be required to take French/Spanish 7120, Foreign Language Teaching Methodology.

Submitting Your Plan of Study to the Graduate School Office
MA candidates must submit a completed M-1 Plan of Study form to the Graduate School at least one semester before taking their MA examinations.

Funding Through Graduate Instructorships
MA candidates normally receive 4 semesters of financial support from the University while completing their degree. This support will customarily take the form of a graduate instructorship, though it may take the form of either a research or teaching assistantship.

Possible Fifth Semester of Support
In exceptional cases, students in good standing — with no grades of Incomplete and unproblematic teaching — may receive a fifth semester

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of support, at the discretion of the faculty. Faculty will award a fifth semester of support according to the department's need for instructors. Students must submit all requests for a fifth semester of support in writing to the director of graduate studies. No student will receive more than five semesters of support.

Normal Teaching Load vs. Course Load
The normal teaching assignment for MA candidates holding instructorships is 2 courses per semester. International students may never teach more than 2 courses per semester owing to visa restrictions. All MA candidates must be registered in a minimum of 6 hours of course work for each semester in which they hold an instructorship. Students may enroll in up to 6 hours per semester of 8080 (Readings) if they have completed all their course work and are preparing for their MA exams.

Annual Review
The faculty and course directors in both major languages meet during the fall and spring semesters, to evaluate the teaching and academic performance of all graduate students. The director of graduate studies informs all students in writing of their status at the end of each semester. Students who fail to remove a grade of Incomplete will be limited to 5 hours of teaching per semester for as long that grade of Incomplete remains on their academic record. This excludes Research (9090).

Master's Thesis
The writing of a thesis is optional. A minimum of 4 hours and a maximum of 6 hours of 8090 Research will be allowed for the thesis. Students are urged to obtain the Graduate School's guidelines for thesis/dissertation writing as the thesis must conform to the Graduate School's formatting and style specifications.

Thesis Committee
Students choosing to write a thesis must name a Thesis Committee consisting of no fewer than three members of the doctoral faculty at the University of Missouri, one of whom should be from a department other than the Department of Romance Languages and Literatures.

Comprehensive Examination for the MA degree
All candidates for the Master of Arts degree must pass a 6-hour written

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examination based on the MA reading list. The examination is given twice a year, in October and March.

The French Master's examination consists of six 1-hour parts covering literature of the Middle Ages, Renaissance, 17th, 18th, and 19th centuries and the contemporary period.

The Spanish examination consists of two 3-hour examinations. The first component covers Peninsular Spanish literature from the Middle Ages to the present and the second component covers Spanish American literature from the Colonial period to the present.

At least half the examination must be written in the candidate's language of specialization.

Grading of the Comprehensive Exam
The MA examination is graded as follows: High Pass, Pass, and Fail. In order to receive a passing grade on any section of the examination, a student must receive passing grades from two thirds of the examining committee. To pass the entire examination, students must receive passing grades on all sections. With permission from the Examining Committee, students who fail part of the examination may retake only the failed section or sections of the examination. Two failures of the examination, in whole or in part, will terminate candidacy for the degree and result in dismissal from the program.

Master of Arts, Language Teaching emphasis, in Spanish or French

Admission
Same as for the Master of Arts above.

Language Proficiency Upon Entrance
All graduate students except native speakers of French or Spanish must complete a proficiency examination in their major language at the start of their first academic year. Students whom the faculty deem to be deficient in either their written or spoken grasp of the language will need to undertake remedial work. These students will be reexamined the following year. A second failure on the proficiency examination will terminate a student's eligibility for the MALT degree and result in

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dismissal from the graduate program.

Choosing an Adviser
All graduate students in the department may choose, or the director of graduate studies will assign them, an academic adviser at the start of their first semester of graduate study. Students must choose an academic adviser by the end of their first semester of graduate study.

Plan of Study
Students must complete a total of 30 credit hours at the graduate-level to earn their MALT degree. At least 15 credit hours must be in courses at the 8000 level or above and 6 of these credit hours must be from courses offered in the Department of Romance Languages and Literatures. Students may complete a maximum of 9 credit hours outside their home department, but only with the approval of their academic adviser.

Working Toward a Teaching Certificate
Students who wish to pursue a teaching certificate while working on their degree will also need to take courses required by the State in the College of Education. Interested students should contact the professional advisers in the College of Education for certification requirements. These students, with their adviser's consent, may use the 9 hours allowed outside the department to fulfill part of their certification requirements, provided these hours correspond to graduate level courses.

Submitting the Plan of Study to the Graduate School Office
MALT candidates must submit a completed M-1 Plan of Study to the Graduate School at least one semester before completing their comprehensive examinations.

Funding Through Graduate Instructorships
MALT candidates normally receive 4 semesters of financial support from the university while completing their degree. This support will customarily take the form of a Graduate Instructorship, though it may take the form of either a Research or Teaching Assistantship.

Possible Fifth Semester of Support
In exceptional cases, students in good standing — with no grades of

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Incomplete and unproblematic teaching — may receive a fifth semester of support, at the discretion of the faculty. Faculty will award a fifth semester of support according to the department's need for instructors. Students must submit all requests for a fifth semester of support in writing to the director of graduate studies. No student will receive more than five semesters of support.

Normal Teaching Load vs. Course Load

The normal teaching assignment for MALT candidates holding instructorships is 2 courses per semester. International students may never teach more than 2 courses per semester owing to visa restrictions. All MALT candidates must be registered in a minimum of 6 hours of course work for each semester in which they hold an instructorship. Students may enroll in up to 6 hours per semester of 8090 (Readings) if they have completed all their course work and are preparing for their MALT exams.

Annual Review

The faculty and course directors in both major languages meet during the fall and spring semesters, to evaluate the teaching and academic performance of all graduate students. The director of graduate studies informs all students in writing of their status at the end of each semester. Students who fail to remove a grade of Incomplete will be limited to 5 hours of teaching per semester for as long that grade of Incomplete remains on their academic record. This excludes Research (9090).

Comprehensive Examination for the MALT degree

Candidates for the MALT degree must pass a 6-hour written examination, which consists of three two-hour components: Applied Linguistics; Foreign Language Methodology/Second Language Acquisition; and civilization or literature. The questions will relate to the candidate's course work, though they may also derive from texts specifically assigned by the Examination Committee.

Grading of the Comprehensive Exam

The MALT examination is graded as follows: High Pass, Pass, and Fail. In order to receive a passing grade on any section of the examination, a student must receive passing grades from two thirds of the examining committee. To pass the entire examination, students must receive passing grades on all sections. With permission from the examining

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committee, students who fail part of the examination may retake only the failed section or sections of the examination. Two failures of the examination, in whole or in part, will terminate candidacy for the degree and result in dismissal from the program.

Doctorate in Romance Languages & Literatures

Admission Information

Internal Doctoral Applicants

Students who wish to advance to the doctoral program after completing their MA degree in the Department of Romance Languages and Literatures may do so only after receiving written approval from the MA examining committee. Alternatively, candidates may not advance to the doctoral program if the examining committee determines, after the MA examination, that their degree is terminal.

Students advancing directly from the MA to the PhD program need to complete only a Change of Degree Program form, which the department submits to the Graduate School.

Students who apply to the doctoral program one semester or more after completing their MA examinations must complete a Request to Re-enroll form and reapply to the doctoral program. They must submit a new departmental application and reference letters. They need not submit a new application to the Graduate School.

Entering Language Proficiency

All graduate students except native speakers of French or Spanish must complete a proficiency examination in their major language at the start of their first academic year. Students whom the faculty deem to be deficient in either their written or spoken grasp of the language will need to undertake remedial work. These students will be reexamined the following year. A second failure on the proficiency examination will terminate a student's eligibility for the PhD degree and result in dismissal from the graduate program.

Specialization

The Department of Romance Languages and Literatures offers three fields of specialization at the doctoral level: French Literature, Spanish Literature or Spanish American Literature.

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Candidates may elect a secondary field, which entails a minimum of 9 hours of course work within another department, in consultation with their doctoral program committee. This secondary field appears on students' plan of study, but not on their transcript. Students electing a secondary field must complete a PhD examination that will include at least one question devoted to their secondary field.

Choosing an Adviser
All graduate students in the department may choose, or the director of graduate studies will assign them, an academic adviser at the start of their first semester of graduate study. Students must choose an academic adviser by the end of their first semester of graduate study.

Qualifying Examination
All PhD candidates must complete a qualifying examination during their first year in the program to determine their fitness for doctoral study.

Exemptions
The faculty may excuse students from this requirement if those students received their MA degree from this department, earned a grade of High Pass on all sections of their MA examination, and enrolled in the PhD program the semester after fulfilling all requirements for the MA degree.

Purpose and Questions
The qualifying examination provides an opportunity for the faculty to evaluate candidates and advise their future course of study in the program. The examination consists of two questions related to the candidate's course work during the previous and current semester: one question requires analysis of a text; the other, discussion of a general topic (e.g., a literary genre, a particular author, a critical or artistic movement, and so on). The candidate's academic adviser delivers both questions to the candidate three days before a meeting with the examining committee.

Exam Meeting with the Committee
At this meeting, the candidate offers two oral presentations of 20-25 minutes each, based on the two questions. Following these presentations, the candidate responds to comments and questions from the examining committee. At the close of this meeting, the examining committee determines whether the candidate's performance warrants

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a grade of Pass or Fail. The examining committee communicates these results to the Graduate School in writing, on a D-1 form bearing the signatures of the candidate and all members of the committee. Students who receive a failing grade must retake this examination before the end of the following semester. A second failure on this examination terminates eligibility for the PhD degree and will result in dismissal from the graduate program.

Arranging the Committee
All arrangements for the qualifying examination are the joint responsibility of the candidate and the candidate's academic adviser. Any tenured or tenure-track member of the faculty may act as academic adviser to students during their first year of doctoral study. The academic adviser need not act as the director of that student's PhD examination or dissertation committee.

Submitting Results
Students who earn a passing grade on their qualifying examination submit the D-1 form to the Graduate School, communicating the results of the examination and formally naming their doctoral committee.

Plan of Study & Degree Requirements
After the qualifying exam, students and their doctoral committee meet to devise a plan of study. The doctoral committee signs and submits this plan of study with the D-2 form to the Graduate School. Students in the PhD program must complete a minimum of 72 hours of course work, which includes a maximum of 30 credit hours earned as part of their MA degree. These credit hours must include course work in language teaching methodology (French/Spanish 7120 or the equivalent) and, if applicable, the candidate's secondary field. Spanish doctoral candidates must also complete course work in Old Spanish.

Language Requirement
PhD candidates must demonstrate reading proficiency in Latin. They may satisfy this requirement by passing a written examination given by the Classical Studies Department or by completing Latin 1100 H or the equivalent with a grade of B or better. Students should fulfill this requirement during their first year of doctoral study.

Students must also demonstrate reading proficiency in at least one

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language other than English and the language of their major field. Students pursuing a secondary field in a non-English literature different from that of their major field may satisfy this requirement by taking at least three 7000-level courses in that literature. Students may also fulfill this requirement by passing a reading proficiency exam administered by the appropriate language department or completing an intensive beginning language course, devoted specifically to reading proficiency, with a grade of B or better.

Candidates should bear in mind that no basic language courses, including Latin, carry graduate credit.

Financial Support: Graduate Instructorships
PhD candidates normally receive 6 semesters of financial support from the university while completing their plan of study and 4 additional semesters of support after completing their PhD examination. This support will customarily take the form of a Graduate Instructorship, though it may take the form of either a Research or Teaching Assistantship.

The normal teaching assignment for PhD candidates holding instructorships is one course during their first semester of study and 2 courses every semester thereafter. Students writing their dissertation may teach an additional course. International students may never teach more than 2 courses per semester owing to visa restrictions. All PhD candidates must be registered in a minimum of 6 hours of course work for each semester in which they hold an instructorship.

Students may enroll in a maximum of 6 hours per semester of 9080 (Readings) if they have completed all their course work and are preparing for their PhD exams. Students may enroll in a maximum of 12 hours of 9080 (Readings) over the course of their doctoral studies, provided this occurs within their first six semesters of financial support. After passing their PhD examination, students may retain their Instructorships if they enroll in Research (9090) for a minimum of 5 credit hours per year (2 in fall; 2 in spring; 1 in summer).

Annual Review
The faculty and course directors in both major languages meet during the fall and spring semesters, to evaluate the teaching and academic

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performance of all graduate students. The director of graduate studies informs all students in writing of their status at the end of each semester. Students who fail to remove a grade of Incomplete will be limited to 5 hours of teaching per semester as long that grade of Incomplete remains on their academic record. This restriction applies to courses other than Research (9090).

The PhD Comprehensive Examination

The comprehensive examination consists of a written and oral section. Before the exam, each student, in consultation with his or her doctoral committee, compiles a reading list based in part on the department's MA reading list and additional titles suggested by the committee members, in light of the student's specialized field. Students and their committee must decide beforehand the areas to be encompassed in the examination. The examination consists of four 3-hour components, three in literature and a fourth in genre, theory or, if applicable, a secondary field. Students must write at least one component of the examination in the language of their major field (Spanish or French). A student must complete the comprehensive exam within a period of 5 years, beginning with the first semester of enrollment as a PhD student.

The committee will assign the examination a grade of High Pass, Pass, Fail or Abstain. Students who pass the written portion of the exam will thereafter take the oral examination as soon as possible. The oral examination will last 1-2 hours, part of which must be in the language of the candidate's specialized field. The oral exam allows candidates to clarify, strengthen or amplify their answers on the written exam. Part of the oral examination also includes a discussion of the student's proposed dissertation — its topic, organization and critical method.

Students must submit a 5-10 page prospectus of their proposed dissertation topic as part of this discussion. After students complete both portions of the exam with a passing grade, the examining committee submits a D-3 form to the Graduate School. Two failures of the examination, in whole or in part, terminate candidacy for the degree and will result in dismissal from the graduate program.

Research and Dissertation

Doctoral students register in 9090 (Research) once they have passed their PhD examinations. They will customarily enroll in 2 credit hours

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of 9090 during the fall and spring semesters and 1 hour during the summer semester, for a minimum of 12 hours. In addition, the program for the doctoral degree must be completed within five years of passing the comprehensive examination. Individual departments or area programs may stipulate a shorter time period. Doctoral students should complete all requirements for the degree, including the dissertation, within five years of passing the comprehensive examination. The Graduate School extends this deadline in extenuating circumstances. Nonetheless, students must request additional time in writing from the director of graduate studies. Failure to show sufficient progress on the dissertation may result in dismissal from the graduate program. Students should obtain the Graduate School's guidelines for thesis/dissertation writing since the dissertation must conform to the formatting and style specifications established by the Graduate School.

Defense
Candidates and their directors schedule a formal defense of a dissertation after its acceptance by all members of the doctoral committee. This oral defense, conducted by members of the doctoral committee, is open to the public.

Courses

See the Romance Language and Literatures graduate courses in the myZou online system:

Romance Language (RM LAN)
French (FRENCH)
Spanish (SPAN)

END OF PROGRAM DESCRIPTION

Rural Sociology Graduate Programs

Contact Information

College of Agriculture, Food and Natural Resources
121 Gentry Hall
573-882-7451
http://www.ssu.missouri.edu/ruralsoc/

About the Program

The Department of Rural Sociology offers the MS and PhD degrees. The program consists of broad training in sociological theory and methodology with attention to application and policy issues. All students take a core of four courses in statistics, theory and methodology.

Specializations

Areas of specialization in the department are: the sociology of the environment and food and community studies.

Financial Aid from the Program

Request for financial support is made by the student at the time of application. Most of the financial support is for research assistantships. Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Rural Sociology Faculty

Johanna Reed Adams
extension assistant professor, PhD, University of Missouri.

Rex R. Campbell
professor emeritus, PhD, University of Missouri.

Chris Fulcher
research assistant professor, PhD, University of Missouri.

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Jere L. Gilles
associate professor, PhD, Cornell University.

Mary E. Grigsby
associate professor, PhD, University of Missouri.

Mary Hendrickson
extension associate professor, PhD, University of Missouri.

Sandra Hodge
extension associate professor, PhD, Michigan State.

Stephen Jeanetta
extension assistant professor, PhD, University of Missouri – St. Louis.

Mary Simon Leuci
extension assistant professor, Ed D, University of Missouri.

Michael F. Nolan
professor and chair, PhD Pennsylvania State University.

David O'Brien
professor, PhD, Indiana University.

Kenneth E. Pigg
associate professor emeritus, PhD, Cornell University.

J. Sanford Rikoon
professor, PhD, Indiana University.

Judy Stallman
professor, PhD, Michigan State University.

James K. Scott
research associate professor, PhD, University of Missouri.

William D. Heffernan
professor emeritus, PhD, University of Wisconsin.

Daryl J. Hobbs
professor emeritus, PhD, Iowa State University.

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Admission Contact Information

Carol Swaim
121 Gentry Hall; Columbia, MO 65211
573-882-7451

Admission Criteria

- Fall deadline: N/A
- Minimum TOEFL score: 570/233 (paper/computer)
- Minimum GRE score: none set
- Minimum GPA: 3.0 for domestic applicants
- An undergraduate and/or graduate degree in a social science or equivalent is desirable
- Basic understanding of statistics

Students entering with a bachelor's degree normally are admitted into the master's program, but those with exceptional academic credentials may be admitted directly into the doctoral program. Read more about this exception on the doctorate page. Up to 12 hours of makeup work may be required for students who have less than adequate undergraduate preparation.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Rural Sociology Program:

- Departmental application
- GRE score report
- 3 letters of recommendation

Master of Science in Rural Sociology

Two Master's Degree Options

Professional Master's Degree

The degree is designed for persons who wish to have the training needed to carry out applied research, policy analysis and program evaluation in a government or business. The 39-credit program includes a six- to eight-credit- hour internship.

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Specializations
There are two options for this degree — community facilitation and analytical processes for community.

Course Requirements
Two courses required for both options is Rural Sociology 7325 American Community Studies; and Rural Soc 8510 Research Methodology however students wishing to go on for a PhD must complete Rural Sociology 7130 and Sociology 8100. Students must also take 3 courses out of the Rural Sociology core. The core includes Rural Sociology 7120, 7130, 7370, 7310, 7335, 7446, 8287, 8435, 8444, 8447, 8610 and 9187. Required courses for the community facilitation option are Rural Sociology 7341 and Public Affairs 8610 and 8630. Current required courses for analytical processes option are Rural Sociology 7130 and Agricultural Economics 9310. More details can be found by referring to the on line graduate student handbook.

Practical experience
Each student will have a practical experience through an internship doing applied social science work with a private or a public agency. The type of internship will vary according to student needs and interests, but it should be the equivalent of at least three months of full-time employment. Students will receive six to eight credits for this experience and will prepare a written report of their experience. Previous experience may be substituted for part of this requirement.

Master's Degree
A traditional 30-hour master's degree with thesis also is offered. Students choosing the 30-hour MS degree may expect to continue toward a PhD. Required courses for this degree are Rural Sociology 7130 and 8510 and Sociology 8100.

Doctorate in Rural Sociology

Admission and Recommended Prerequisites
Admission to the PhD program is determined by the admissions and awards committee using the documentation as indicated on About Rural Sociology. Although it is desirable that entering students have a strong background in sociology, students of high merit who do not have such a background are encouraged to apply. Such applicants may be required

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to take such graduate-level work as is necessary to remedy deficiencies in their background on rare occasions. Extremely well qualified students with a BS/BA degree may pursue the PhD program without obtaining a master's degree. In those cases, the student may prepare a research article for submission to a professional journal or a in lieu of thesis project in order to be considered a qualified PhD candidate.

Degree Requirements
Besides the four core of courses for all graduate students, students in the PhD program take a core consisting of an advanced quantitative methods course, an advanced qualitative methods course and an advanced theory course, a social change course, and five courses in community studies and environment and food, and Rural Sociology—three in their area of concentration and two in the other area.

Courses

See Rural Sociology (RU SOC) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Russian & Slavonic Studies Master of Arts

Contact Information

College of Arts and Science
451 Strickland Hall
573-882-4328
http://grs.missouri.edu/degprogs/russiangradstudies.html

About the Degree Program

The Master of Arts program in Russian and Slavonic Studies offers advanced study in the culture of Russia and Eastern Europe, spanning a variety of interrelated aspects — literature, history, religion, philology, philosophy and fine arts. Through two years of course work, all students will receive training in the theory and history of Russian language, literature, and culture.

Careers

Students may go on to careers in a number of fields, including government work and international business; they will also be prepared to continue their studies at the doctoral level.

Facilities and Resources

The library of the University of Missouri is particularly strong in Russian history and literature. We are also part of a consortium that provides quick access to the holdings of many other major academic and public libraries.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

In this program, qualified graduate students may have the opportunity to work as teaching assistants in language, literature or civilization courses.

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Russian Faculty

Gennady Barabtarlo
professor of Russian, PhD, University of Illinois.

Timothy Langen
associate professor of Russian, PhD, Northwestern University.

Nicole Monnier
teaching assistant professor of Russian, PhD, Princeton University.

Martha Kelly
assistant professor of Russian, PhD, Stanford University.

Admission Information

Before applying, please send an informal letter of intent or inquiry to either the physical address or e-mail address:

Admission Contact Information
Dr. Gene Barabtarlo send an email to barabtarlog@missouri.edu
451 Strickland Hall
Columbia, MO 65211
573-882-4328

Admission Criteria

- Fall deadline: March 1 (domestic); February 1 (international)
- Spring deadline: September 1 (domestic); May 1 (international)
- Minimum TOEFL score: 500/173/61 (paper/computer/internet)
- Minimum GPA: 3.0 in last 60 hours
- Undergraduate major or minor in Russian or equivalent

No language other than English and Russian is required for admission.

Required Application Materials
To the Graduate School:
All required Graduate School documents

To the Program:
3 letters of recommendation

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Degree Requirements
Students must complete a minimum of 30 hours of graduate-level courses with a GPA of B or higher. In accordance with Graduate School policy, no fewer than 24 of these must be Russian and Slavonic Studies courses at the 7000 or 8000 level, with at least 15 at the 8000 level. In addition, students must demonstrate adequate language skills in English and Russian.

A master's thesis is optional.

COURSES

See Russian (RUSS)graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Social Work Graduate Programs

Contact Information

College of Human Environmental Sciences
724 Clark Hall
573-882-6206
http://ssw.missouri.edu/index.shtml

About the School of Social Work

For over ninety years, social work education has been offered to students at Missouri's premier public institution. The school is proud of its grass roots history: an early pioneer of social work education in 1906, a founding member of the original accrediting body for social work education in 1919, an institution advancing research and scholarship throughout the 20th century, and finally, to its role as an innovator in doctoral education, with a nationally distinctive PhD program emphasizing state social policy.

The mission of the School of Social Work at the University of Missouri is to develop and disseminate knowledge that promotes leadership for social and economic justice through educational programs, scholarship, and service activities of faculty, administration, staff, and students.

Degrees Offered

- Master of Social Work (MSW)
- Doctor of Philosophy in Social Work Program (PhD)

Careers

The nation faces a critical shortage of qualified personnel who possess the rigorous research skills needed to develop, plan, and evaluate social work interventions and the structure of social services. The Master of Social Work (MSW) Program prepares graduates for leadership in professional social work practice within the areas of Clinical Practice or Policy, Planning and Administration Doctoral programs in social work are the major resource for social work researchers and scholars. The rapid growth and development in new social work undergraduate and graduate programs throughout the country has also increased the demand for doctoral social work faculty. In recent years, there have

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been 400-500 doctoral faculty vacancies advertised annually in schools of social work, while the number of graduates has remained at 250-300 per year, with one hundred of those graduates seeking non-academic positions.

Social Work Faculty

Marjorie R. Sable
director, professor, DrPH, University of North Carolina-Chapel Hill.

Michael J. Kelly
professor, PhD, director of the doctoral program, University of Texas-Austin.

Carol A. Snively
clinical assistant professor, director of MSW program & off campus program PhD, The Ohio State University.

Dianne J. Orton
clinical assistant professor, DPhil, Stellenbosch University

Colleen Galambos
professor, PhD, Catholic University of America.

William L. (Bill) Elder
research associate professor, PhD, University of Missouri.

Martha Markward
associate professor, PhD, University of Illinois at Urbana-Champaign.

J. Wilson Watt
associate professor, PhD, University of Illinois-Chicago.

Kim Anderson
associate professor, PhD, University of Kansas.

Angela Curl
assistant professor, PhD, Case Western Reserve University.

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Victoria Osborne
assistant professor, PhD, Washington University.

Dong Pil Yoon
associate professor, PhD, University of Illinois at Urbana-Champaign.

Mansoo Yu
assistant professor, PhD, Washington University.

Kalea Benner
clinical instructor, PhD, director of undergraduate studies, University of Missouri.

Suzanne Cary
assistant clinical professor, MSW, University of Missouri.

Tammy L.W. Freelin
clinical instructor, student services coordinator, MSW, University of Missouri.

Linda Hillemann
clinical instructor, southeast program coordinator, MSW, University of Missouri.

Karen Woodbury
clinical instructor, MSW, northern program coordinator, University of Missouri.

Dale Fitch
assistant professor, PhD, University of Texas at Arlington.

Clark Peters
assistant professor, PhD, University of Chicago.

Candace Iveson
clinical instructor, MSW, Washington University.

Kirsten Havig
clinical instructor, MSW, University of South Carolina.

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Master of Social Work

Admission Contact Information

Crystal Null (nullc@missouri.edu)
724 Clark Hall; Columbia, MO 65211
573-884-9385
http://ssw.missouri.edu/msw.shtml

About the MSW Program

The Master of Social Work (MSW) degree program is designed to prepare the student for leadership in social and economic justice in professional social work practice. The program is fully accredited by the Council on Social Work Education, of which the School of Social Work is a charter member.

Preparation for professional leadership encompasses two major components:

1. **Foundation**
   Develops knowledge and skills related to social interaction, human development, community dynamics, social policy and societal values applicable to generalist social work practice.

2. **Concentration**
   Emphasizes advanced knowledge and skill building for specialized applications in Clinical Practice or in Policy, Planning and Administration, based on individual student's assessment of planned career path. The School of Social Work is especially dedicated to enhancing social and economic justice by improving the provision of social services to public sector clientele. The School is a national leader in rural social work education.

MSW Concentrations

Students may choose between two concentrations: advanced clinical practice, and policy, planning and administration. Decisions regarding concentration are made by students in close consultation with faculty advisers. Selective and elective courses, the block field practicum, and required research and practice courses comprise the concentration work.

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Application and Admission Information

Admission Criteria

- Fall deadline: February 15
- Spring deadline: September 15
- Summer deadline: February 15
- Minimum TOEFL score: 500/173/61 (paper/computer/IBT)
- Minimum GPA: 3.0

Bachelor's degree from an accredited college or university reflecting a sound liberal arts foundation, including humanities courses, as well as social and behavioral sciences course.

Priority admission deadline for Regular Standing Applicants: February 15. A student qualifies for Regular Standing Admission if s/he has an undergraduate degree in any field other than Social Work. Any applicant who applies after the priority deadline will be considered on the rolling admission cycle until April 15.

Priority admission deadline for Advanced Standing applicants: February 15 (for summer admission), September 15 (for spring admission). An applicant qualifies for Advanced Standing admission if they have a bachelor's degree in Social Work earned within the last seven (7) years. Any Advanced Standing applicant who applies after the priority deadline of February 15 for summer admission will be considered on a rolling admission cycle until April 15. Any Advanced Standing applicant that applies after the priority deadline of September 15 for spring admission will be considered on a rolling admission cycle until November 15.

Read more about Regular vs. Advanced Standing below.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the MSW Program:

- Departmental application
- Personal statement
- 3 letters of recommendation (use form provided by the department)

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Financial Aid from the Program
Scholarship opportunities are available for full-time program applicants who meet the early application deadline. Graduate assistantships may also be available. Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Plan of Study
The curriculum is based on a generalist conception of social work practice. During the first semester, major attention is given to the acquisition and development of foundation knowledge and behavioral skills, including environmental assessment and interaction skills.

The concentration courses start during the second semester. In the second year, classroom course work comprises the first semester. The second semester is devoted to a full-time practicum in the student's chosen concentration. The school uses practicum sites throughout Missouri and beyond.

Tracks: Based on Undergraduate Experience

There are two routes to the MSW degree within the school, depending on the applicant's undergraduate major.

Regular Standing: Non-Social-Work Bachelor's
The regular 60-credit hour degree is appropriate for students who have undergraduate degrees other than accredited social work degrees. The school admits full-time and part-time students to the regular 60-credit hour program at the beginning of the fall semester only.

Advanced Standing: Bachelor's in Social Work
Students who have graduated within the past seven years from a baccalaureate social work program accredited by the Council on Social Work Education may be eligible for the Advanced Standing Program, which is an accelerated 39-credit hour degree.

Starting Dates
Students admitted to the Regular Standing Program are admitted either in fall semester (full-time or part-time study) or spring semester (part-

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time study only). Students admitted to the Advanced Standing Program are admitted either in the spring or summer session. Advanced standing students in the policy, planning and administration concentration must enter in the spring semester.

Length of Study & Satisfactory Progress

Full-time regular students graduate in two years; Advanced Standing full-time students in 12-17 months. Part time students take 2 classes every semester, including summer, and graduate in three years. All students are full-time during their last semester while completing block placement. All students must complete at least eight hours per academic year to maintain a satisfactory rate of progress.

Doctorate in Social Work

Admission Contact Information

Shannon Mezzanotte (mezzanottes@missouri.edu)
724 Clark Hall; Columbia, MO 65211
573-884-1438

About the Program

The Doctor of Philosophy (PhD) program in social work focuses on research that informs social welfare policy and practice. It is designed to prepare scholars for research, teaching and program development positions in academic and professional social work practice and policy settings.

Plan of Study

The PhD program is available to both persons with a Masters of Social Work (MSW) degree and those with other master's degrees. The curriculum consists of a minimum of 51 post MSW semester credit hours or, for applicants without an MSW, 63 hours as explained below. The curriculum is divided among three distinct but highly interrelated elements designed to complement one another in assisting students to achieve the competencies expected of a graduate of this program. A core of social work courses provides the foundation in the traditions and knowledge in the profession and exposure to state- of-the-art research and techniques for the 21st century. Electives from the broad spectrum of social and behavioral sciences offering available through MU departments provide students with the opportunity to design an

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individualized plan of study that capitalizes on their unique interests and talents. A strong regimen of research methodology, theory and policy analysis are design to prepare students for use of both current and emerging methods of scientific inquiry.

Financial Aid from the Program
Scholarship opportunities are available for full-time program applicants who meet the early application deadline. Graduate teaching and research assistantships are also often available. Some forms of support require additional forms from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Application and Admission Information

Admission Criteria

- Fall deadline: January 15
- Minimum TOEFL score: 500/173 (paper/computer)
- Minimum GPA: 3.0; 3.5 in graduate study
- An MSW or related master's is required. Applicants without the MSW must take a minimum of 12 credit hours of MSW course work. This requirement may be waived for applicants with additional graduate work.
- Minimum of two years post-master's practice experience encouraged
- These criteria are used flexibly to assess the applicant's potential for study and research in this program.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the PhD in Social Work Program:

- Departmental application
- 3 letters of recommendation
- GRE score report
- Résumé
- Writing proficiency sample
- A personal interview is required, and if possible, will be arranged at MU. A telephone interview may be utilized in some cases.

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Courses

See Social Work (SOC WK) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Sociology Graduate Programs

Contact Information

College of Arts and Science
312 Middlebush Hall
573-882-8331
http://sociology.missouri.edu/New%20Website%20WWW/Graduate_Program/Graduate.htm

About the Program

The Department of Sociology engages students in research, utilizing qualitative and quantitative research methodologies, in order to analyze issues and problems affecting modern societies.

In our PhD program, the core of graduate training is in classical and contemporary theory and research methods including quantitative, historical, and feminist methodologies, and interviews and fieldwork.

Specializations

Students may focus their studies on any two of the following graduate program areas:

- Culture and Identity
- Deviance and Social Control
- Health, Aging, and Environment
- Political and Economic Institutions, Social Movements, and Public Policy
- Social Inequalities

Within these program areas, students conduct research on such topics as gender, criminology, social policy, aging, religion, race, sexualities, and labor.

Financial Aid from the Program

Financial support for students includes teaching and research assistantships, both of which include remission of educational fees. International students cannot be awarded teaching assistantships until the have completed one semester of residence at MU and pass a test of spoken English.

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Sociology Faculty

Jaber F. Gubrium
chair, professor, PhD, Wayne State University. Aging, narrative, qualitative methods, theory.

Edward E. Brent
associate chair, professor, PhD, University of Minnesota. Methodology, statistics, computer applications.

David Brunsma
professor, PhD, University of Notre Dame. Racial identity, race and ethnic relations, sociology of culture, sociology of education.

John F. Galliher
professor, PhD, Indiana University. Criminology, law, professional ethics.

Ibitola O. Pearce
professor, PhD, Brown University. Medical sociology, race/class/gender, development.

Wayne Brekhus
associate professor, PhD, Rutgers University. Theory, culture, sexuality.

Joan Hermsen
associate professor, PhD, University of Maryland-College Park. Sex and gender, stratifi cation/mobility, family.

Victoria Johnson
associate professor, PhD, University of California-Davis. Historical comparative methods, social movements, labor.

Clarence Y.H. Lo
director of graduate studies, associate professor, PhD, University of California-Berkeley. Political, social movements, urban, qualitative/historical methods.

Eric Brown
assistant professor, PhD, California-Berkeley. Race and ethnicity, urban sociology, and social stratification.

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Eileen E.S. Bjornstrom
assistant professor, PhD Ohio State-Columbus. Medical sociology, urban sociology, statistics, quantitative methodology.

Amit Prasad
assistant professor, PhD, University of Illinois Urbana-Champaign. Sociology of science and medicine.

Srirupa Prasad
assistant professor, PhD, University of Illinois Urbana-Champaign. Gender Studies, Medical Sociology, Transnational Studies.

Rebecca R. Scott
assistant professor, PhD, University of California-Santa Cruz. Gender, race and class, environmental inequality, feminist ethnography.

Doctorate in Sociology

Admission Contact Information

Graduate Admissions Coordinator (oakesm@missouri.edu)
312 Middlebush Hall; Columbia, MO 65211
573-882-8331

Admission Criteria

- Fall deadline: January 15 Minimum TOEFL score: 500/173 (paper/computer)
- Minimum GRE score: case-by-case
- 15 hours of undergraduate sociology with a grade of B or better, including one course in sociological theory and a basic statistics course

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Sociology Program:

- GRE score report
- Departmental application
- 3 letters of recommendation
- Statement of purpose

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- Copy of Graduate School application (needs to be printed out when done online)
- Copies of transcripts (it is helpful to have unofficial copies sent to the department)
- One page Application for Financial Support
- Research paper, master's thesis, senior thesis, or term paper

PhD Plan of Study
The PhD program requires a minimum of 30 hours of course work, including 8100 and two additional seminars in sociological theory (9187 and 9487) and 8120, 7120 (or its equivalent), 8130, and two seminars in sociological research methods (7110, 8187, 9287, 9288, 9687, or 9837), plus courses targeted to the student's specialty interests.

Exams and Research
All students are required to submit a research paper no later than their fourth semester of residence. Students with a Master's Thesis in sociology can fulfill this requirement as early as their first semester. At least eight months before the date on which they expect to complete the degree, candidates must pass a comprehensive examination centered on two of the four graduate program areas. Students must prepare and successfully defend a dissertation that makes an original contribution to the discipline.

Courses

See SOCIOLOGY (SOCIOL) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Soil, Environmental & Atmospheric Sciences Graduate Programs

Contact Information

School of Natural Resources
302 Anheuser-Busch Natural Resources Building
573-882-6301
http://www.snr.missouri.edu/seas/academics/graduate-program.php

About the Soil, Environmental, and Atmospheric Sciences (SEAS) Program

Soil, environmental, and atmospheric science graduate programs are designed to prepare students for professional careers in research, teaching or practical application of principles of soil, environmental and atmospheric sciences.

Recommended Preparation

Appropriate undergraduate majors in preparation for graduate studies in soil, environmental and atmospheric sciences include: agronomy, atmospheric science, biochemistry, biology, biogeochemistry, botany, chemistry, earth science, civil and environmental engineering, environmental science, forestry, geosciences, hydrology, mathematics, microbiology, physics, soil science, and watershed management.

Degrees Offered

- Master of Science in Soil, Environmental & Atmospheric Sciences
- Doctor of Philosophy in Soil, Environmental & Atmospheric Sciences

Degree Specializations

Atmospheric Science

Atmospheric science students participate in an area of research such as dynamic and physical meteorology, general circulation, global climate change, severe storms, remote sensing and applied climatology with emphasis on environmental and socioeconomic impacts.

The program has a specialized computer data library that includes extensive long-term global and local observational records to support

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thesis and dissertation research. There are opportunities for joint research programs with the National Center for Atmospheric Research.

Environmental Science
Environmental science students may participate in environmental quality, hydrology, watershed management, and water quality emphasis areas. Equipment for chemical, biological and physical analysis of water and earth materials is available for use in laboratories maintained by the SEAS Department in the School of Natural Resources.

The program has a working scale-nested watershed study spanning native lands as well as agricultural, and urban environments, thus supplying an outdoor teaching and research laboratory.

Soil Science
Soil science students may participate in one of the following emphasis areas: environmental quality, pedology, soil chemistry and biochemistry, soil microbiology, soil physics and conservation, soil management, or soil fertility and soil-plant relationships.

Equipment for chemical, biological and physical analysis of soils is available for use in laboratories maintained by the SEAS Department in the School of Natural Resources. Access to additional chemical analysis equipment, computing facilities, digital imaging equipment, field facilities, greenhouse space, radiochemistry and scanning electron microscopes is available within the University of Missouri.

Financial Aid from the Program
Check the program Web site or contact the program for details on scholarships or graduate assistantships that may be available.

Soil, Environmental and Atmospheric Sciences Faculty

Anthony R. Lupo
chair, professor, PhD, Purdue University. Atmospheric dynamics.

Peter P. Motavalli
director of graduate studies, associate professor, PhD, Cornell University. Soil fertility and plant nutrition.

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Stephen H. Anderson
professor, PhD, North Carolina State University. Environmental soil physics.

Clark J. Gantzer
professor, PhD, University of Minnesota. Soil conservation.

Neil I. Fox
associate professor, PhD, University of Salford-United Kingdom. Remote sensing and hydrology.

Patrick S. Market
associate professor, PhD, Saint Louis University. Synoptic and mesoscale meteorology.

Randall J. Miles
associate professor, PhD, Texas A&M University. Soil genesis and mineralogy.

Keith W. Goyne
assistant professor, PhD, The Pennsylvania State University. Environmental soil chemistry.

Jason A. Hubbart
assistant professor, PhD, University of Idaho, Hydrologic science and water quality.

Patrick E. Guinan
extension assistant professor, PhD, University of Missouri. Climatology.

Ranjith P. Udawatta
research assistant professor, PhD, University of Missouri. Water quality and watershed management.

Robert J. Kremer
adjunct professor, PhD, Mississippi State University. Soil microbiology.

E. John Sadler
adjunct professor, PhD, Texas A&M University. Soil and water management.

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Peter C. Scharf
adjunct professor, PhD, Virginia Polytechnic Inst. & Univ. Soil fertility.

W. Gene Stevens
adjunct professor, PhD, Mississippi State University. Soil fertility.

Christopher K. Wikle
adjunct professor, PhD, Iowa State University. Statistical meteorology.

Frieda Eivazi
adjunct associate professor, PhD, Iowa State University. Soil biochemistry and fertility.

Newell R. Kitchen
adjunct associate professor, PhD, Colorado State University. Soil fertility.

Felix Ponder
adjunct associate Professor, PhD, Southern Illinois University. Forest soils.

Ronald E. Rinehart
adjunct associate professor, PhD, Colorado State University. Radar and atmospheric physics.

John Yang
adjunct associate professor, PhD, University of Missouri. Soil chemistry.

James O. Adegoke
adjunct assistant professor, PhD, Pennsylvania State University. Satellite climatology.

Claire Baffaut
adjunct assistant professor, PhD, Purdue University. Hydrology and soil conservation.

Robert N. Lerch
adjunct assistant professor, PhD, Colorado State University. Soil biochemistry.

Fred J. Young
adjunct assistant professor, PhD, University of Missouri. Soil pedology.

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Master of Science in Soil, Environmental & Atmospheric Sciences

Admission Contact Information

Dr. Peter Motavalli, director of graduate studies
(mailto:motavallip@missouri.edu)
302 Anheuser-Busch Natural Resources Building
Columbia, MO 65211
573-884-3212

Admission Criteria

- Deadline: not set
- Minimum TOEFL score: 530/197/71 (paper/computer/Internet)
- Minimum GRE score: Verbal + Quantitative=1100, Analytical=3.5
- Completion of a B.S. degree.
- Undergraduate GPA of 3.0 for the last 60 hours of coursework
- *Atmospheric science applicants*: undergraduate program should include integral calculus and one year of college physics.
- *Environmental science applicants*: undergraduate program should include general and organic chemistry, introductory biology, calculus, geology, physics, and ecology.
- *Soil science applicants*: completed courses in general and organic chemistry, calculus, geology and physics. Inadequacies in courses must be remedied through additional course work immediately after admission.

NOTE: Starting in 2010, all applications and supporting application materials for graduate admission into the SEAS department must be submitted to the Graduate School using the Apply Yourself online application system.

Required Application Materials

- Letter of self-evaluation
- GRE score report
- Three letters of recommendation
- Official transcripts

Send all required documents to the Graduate School.

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MS Degree Requirements

The degree program must include 30 hours of graduate credit, with at least 15 hours of these being in 8000- or 9000-level courses. Not more than 12 hours of the minimum 30 hours are permitted for research, problems, special investigations and special readings. A minimum of one credit hour of graduate seminar must be included in each student's graduate program.

All students enrolled in graduate programs are required to participate in a supervised teaching activity.

Students must maintain a GPA of 3.0 (A=4.0) in all course work presented for the degree.

For an atmospheric science emphasis, appropriate atmospheric science courses must be selected and approved in consultation with the student's advisor and graduate thesis committee.

For a soil science emphasis, at least 12 credit hours of soil science courses at the 7000, 8000, and 9000 levels, exclusive of problems and thesis research, must be included in the student's graduate program.

For an environmental science emphasis, at least six credit hours of environmental science courses at the 7000, 8000, and 9000 levels, exclusive of problems and thesis research, must be included in the student's graduate program. Courses can be selected from the following list:

- Atmospheric Science 7520 – Environmental Biophysics
- Environmental Science 7305 – Environmental Soil Physics
- Environmental Science 7306 – Environmental Soil Physics Laboratory
- Environmental Science 7312 – Environmental Soil Microbiology
- Environmental Science 7318 – Environmental Soil Chemistry
- Environmental Science 7320 – Hydrologic and Water Quality Modeling
- Environmental Science 8400 – Solute Transport in the Vadose Zone
- Environmental Science 8500 – Chemistry of the Vadose Zone
- Forestry 7390 – Watershed Management and Water Quality
- Forestry 8390 – Physical Hydrology

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- Soil Science 7308 – Soil Conservation
- Soil Science 7313 – Soil Fertility and Plant Nutrition
- Soil Science 7314 – Soil Fertility and Plant Nutrition Laboratory
- Soil Science 7320 – Genesis of Soil Landscapes
- Soil Science 9414 – Advanced Soil Fertility
- Soil Science 9422 – Pedology

For an environmental science emphasis, an additional six credit hours must be selected from courses listed above or from the following departments: biochemistry, biological engineering, biological sciences, chemical engineering, chemistry, civil and environmental engineering, fisheries and wildlife sciences, forestry, geography, geological sciences, and natural resources. Selection of these courses will be determined in consultation with faculty members serving on a student's thesis committee.

Thesis
A thesis, which is a research report of original research on a specialized soil or atmospheric science problem conducted by the student, must be presented to the student's graduate committee and successfully defended.

Doctor of Philosophy in Soil, Environmental & Atmospheric Sciences

Admission Contact Information
Dr. Peter Motavalli, director of graduate studies
(mailto:motavallip@missouri.edu)
302 Anheuser-Busch Natural Resources Building
Columbia, MO 65211
573-884-3212

Admission Criteria
- Deadline: not set
- Minimum TOEFL score: 530/197/71 (paper/computer/Internet)
- Minimum GRE score: Verbal+Quantitative=1100, Analytical=3.5
- Completion of an MS degree or equivalent. A waiver of the MS degree requirement may be made by the candidate's doctoral program committee.

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NOTE: Starting in 2010, all applications and supporting application materials for graduate admission into the SEAS department must be submitted to the Graduate School using the Apply Yourself online application system.

Required Application Materials

- Letter of self-evaluation
- GRE score report
- Three letters of recommendation (form provided by the department)
- Official transcripts

Send all required documents to the Graduate School.

PhD Degree Requirements

The curriculum is developed by a doctoral program committee and requires a minimum of 72 semester hours beyond the baccalaureate degree. At least 15 hours of course work in the degree program must be at the 8000 and 9000 levels, exclusive of research, problems and independent study experiences. A minimum of two credit hours of graduate seminar must be included in each student's graduate program.

At least 12 credit hours of soil science courses at the 7000, 8000, and 9000 levels, exclusive of problems and thesis research, must be included in the student's graduate program in soil science.

Qualifying Exam

The student should take the qualifying examination soon after admission into the PhD program and submit an approved plan of study to the Graduate School.

Teaching

All students enrolled in graduate programs are required to participate in a supervised teaching activity.

Comprehensive Exam

After successfully completing the required course work with a GPA of 3.0 (A=4.0) or better, students must pass a written and oral comprehensive examination administered by their doctoral program committee.

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Dissertation
A dissertation, which is a comprehensive report of original research on a specialized soil or atmospheric science problem conducted by the student, must be presented to the student's graduate committee and successfully defended.

Courses

See Soil, Environmental & Atmospheric Sciences (SEAS) graduate courses in the online myZou system.

South Asia Language & Area Studies

Contact Information
South Asian Area Studies
418 Strickland Hall
573-882-3065
http://southasia.missouri.edu

Plan of Study

The program offers a certificate of specialization at the graduate level. Students must fulfill the degree requirements of the department through which they pursue their graduate degrees and are expected to prepare themselves in language and area subjects beyond departmental requirements. Remaining requirements are established to provide maximum flexibility to the student's goals and previous training. The object is to provide both depth and breadth and a meaningful exposure to the area on an interdisciplinary basis. Advisers also may require additional courses to supplement the candidate's undergraduate preparation in Asian studies.

Eligibility

The South Asia Language and Area Center provides a focus for a student who wishes to pursue specialization in South Asian studies at the MA or PhD level. Graduate degrees are pursued through the departments that relate to the center. Besides the graduate degree, a certificate of specialization is awarded with degrees in specific disciplines.

Partners

The participating departments are anthropology, economics, geography, history, philosophy, political science, religious studies, sociology, and women and gender studies. The university is a member of the American Institute of Indian Studies, a consortium and funding agency for the leading South Asia Centers in this country.

Languages Offered

Sanskrit is offered regularly.

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Funding
Individual departments offer financial assistance.

Resources
The library has been developed under the supervision of a professional South Asian librarian. The library was a recipient of books published in South Asia under the P.L. 480 program. Particularly notable is the broad selection of books and microfilm on the Punjab area of South Asia.
A collection of South Asian works of art is in the Museum of Art and Archaeology.

South Asia Language & Area Studies Faculty

Bina Gupta
chair, Curators' Professor & professor of Philosophy; director, South Asian Studies Program, PhD, Southern Illinois University.

Michael Bednar
assistant professor of History, Ph.D., The University of Texas at Austin.

Signe Cohen
associate professor of Religious Studies, Ph.D., University of Pennsylvania.

Amit Prasad
assistant professor of Sociology, Ph.D., University of Illinois.

Srirupa Prasad
assistant professor of Sociology and Women & Gender Studies, Ph.D., University of Illinois.

Gunjan Sharma
assistant professor of Economics, Ph.D., University of Maryland–College Park.

Mary K. Shenk
assistant professor of Anthropology, Ph.D., University of Washington.

N. Gerald Barrier
professor emeritus of History, Ph.D., Duke University.

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Peter Gardner
professor emeritus of Anthropology, Ph.D., University of Pennsylvania.

Paul Wallace
professor emeritus of Political Science, Ph.D., University of California, Berkeley.

Application Information

For a certificate of specialization in South Asian Studies, contact Professor Bina Gupta at 573-882-3065 or send an email.

Courses

See South Asian Studies (S A ST) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Special Education Graduate Programs

Contact Information

College of Education
303 Townsend Hall
573-882-3742
573-884-0520 (fax)
http://education.missouri.edu/SPED/

About Special Education Graduate Programs

We strive to prepare educators to assist children, youth and adults with disabilities to be academically and socially successful life-long learners. Our faculty are consistently recognized — internationally and across the U.S. — for their individual and collaborative teaching and research excellence. The department's unique mix of faculty expertise areas creates a wide range of opportunities for students and researchers. Special Education hosts or co-hosts several state and federally supported training, demonstration and research projects, including the following three centers that focus on facilitating positive developmental outcomes for children and youth with disabilities:

- Center for School-Wide Positive Behavioral Supports
- Center for Adolescent Research in Schools
- Thompson Center for Autism and Neurodevelopmental Disorders

Degrees Offered

MA or M Ed in special education, with emphasis areas in:

- autism
- behavior disorders
- early-childhood special education
- general special education (cross categorical)
- gifted education
- learning disabilities
- learning and instruction

EdSp in special education, with an emphasis area in general special education

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EdD or PhD in special education, with emphasis areas in:

- administration and supervision of special education,
- behavior disorders,
- early-childhood special education
- general special education (cross categorical)
- learning disabilities
- developmental disabilities (cognitive impairments)

Careers

Undergraduate and graduate programs prepare teachers and leadership personnel in the field of special education. Program graduates assume roles as teachers in a variety of educational settings, as consulting teachers, college professors, researchers, school administrators and leaders in state and federal governmental agencies.

Programs meet students' needs and interests within the framework of the requirements of each specific degree and state certification guidelines.

Special Education Faculty

Tim Lewis
professor, PhD, University of Oregon. Behavior disorders and Developmental disabilities.

Sharon Huntze
assistant professor emeritus, EdD, University of Missouri. Behavior disorders.

James E. Leigh
professor emeritus, PhD, University of Southern California. Learning disabilities.

Erica Lembke
assistant professor, PhD, University of Minnesota. Educational psychology (learning disabilities).

Rebecca McCathren
associate professor, PhD, Vanderbilt University. Early childhood special education.

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Michael Pullis
chair, associate professor, PhD, Universiy of California-Los Angeles. Behavior disorders.

Janine Stichter
associate professor, PhD, University of Iowa. Autism and behavior disorders.

Melissa Stormont
associate professor, PhD, Purdue University. Mild disabilities, ADHD, students at-risk.

Delinda van Garderen
assistant professor, PhD, University of Miami, learning disabilities and math difficulties.

Cathy Thomas
assistant professor, PhD, University of Texas, teacher education and special education.

Master or Educational Specialist Degree in Special Education

Admission Contact Information

Special Education Contact (sped@missouri.edu)
303 Townsend Hall; Columbia, MO 65211
573-882-3742

Admission Criteria

- Fall deadline: July1
- Spring deadline: November 1
- Summer deadline: April 1
- Minimum TOEFL score: 600/250 (paper/computer)
- Minimum GRE score: 900 to 1000 Verbal + Quantitative preferred
- Minimum GPA: 3.0/4.0

Faculty selection committees review applications for admission into the various graduate programs. Factors considered in the graduate student review process include previous academic course work and performance, GRE scores, letters of recommendation from professors

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or professional supervisors and relevant professional work experiences. The letter of intent is evaluated for advising purposes and is an indication of the applicant's motivation, professionalism and writing competencies. Interviews with faculty are often arranged as part of the admissions review process.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Special Education Program:

- Departmental application
- Letter of intent and professional goals
- 2 letters of recommendation (form provided by department)
- GRE score report

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Emphasis Areas

For the degree specializations, please see the Degrees Offered area on the first page of this section.

Master's Degrees

Master of Arts

The MA program emphasizes research and requires 33 hours. MA candidates must follow graduate school guidelines with respect to timeliness and committee formations and complete a thesis.

Master of Education

The M Ed program requires 33 hours. The M Ed degree requires a comprehensive examination and project.

Retention

To remain in good standing in the master's program and earn a master's degree, each student must earn and maintain an overall grade point of

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3.0 or higher in all required and elective course work each semester. If student's GPA falls below 3.0 for any semester, they will be dropped from the degree program. If students receive a grade of "C" in any core or required course, remedial activities will be required. Students must also complete course work assigned a grade of "I" prior to the end of the following semester.

Educational Specialist
The Education Specialist program consists of 30 hours beyond the requirements of the master's degree. The Ed Specialist program requires a comprehensive examination. In some cases the specialist committee may require a portfolio.

Satisfactory Progress
For information on general progress guidelines and the dismissal policy, see About Special Education.

Doctorate in Special Education

Admission Contact Information
Special Education Contact (sped@missouri.edu)
303 Townsend Hall; Columbia, MO 65211
573-882-3742

Application and Admission Information
Admission Criteria

- Fall deadline: July 1
- Spring deadline: November 1
- Summer deadline: April 1
- Minimum TOEFL score: 600/250 (paper/computer)
- Minimum GRE score: 1000 Verbal + Quantitative preferred
- Minimum GPA: 3.5/4.0

Faculty selection committees review applications for admission into the various graduate programs. Factors considered in the graduate student review process include previous academic course work and performance, GRE scores, letters of recommendation from professors or professional supervisors and relevant professional work experiences. The letter of intent is evaluated for advising purposes and is an indication of the applicant's motivation, professionalism and writing

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competencies. Interviews with faculty are often arranged as part of the admissions review process.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Special Education Program:

- Departmental application
- Letter of intent and professional goals
- 3 letters of recommendation (form provided by department)
- GRE score report

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Emphasis Areas

For the doctorate's specializations, please see the Degrees Offered area on the first page of this section.

Plan of Study

The PhD program requires 72 hours beyond the requirements of the master's degree.

Qualifying Exam

Doctoral students must successfully pass a qualifying exam. This is given to assess the student's current knowledge of the field, their ability to synthesize professional literature, engage in professional writing practices, and orally present/discuss key issues within the field. This process is conducted by three faculty members and may be used to help define the student's plan of study.

Comprehensive Exam and Dissertation

Doctoral students must complete comprehensive exams, which have a written and oral component, which is constructed and evaluated by the student's doctoral committee in order to advance to "candidacy" status.

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A minimum of six hours of 9090 Research is required for the doctoral program in completion of the dissertation.

Satisfactory Progress
For information on general progress guidelines and the dismissal policy, see About Special Education.

Courses

See Special Education (SPEC ED) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Statistics Graduate Programs

Admission Contact Information

Tracy Pickens, Coordinator of Graduate Studies
146 Middlebush
Columbia, MO 65211
573-882-6376
http://www.stat.missouri.edu/

About Statistics

The Statistics department faculty is known for both cutting edge methodological and collaborative research and for outstanding teaching. Faculty members are currently investigating statistical problems in the fields of ecology, genetics, economics, meteorology, wildlife management, epidemiology, AIDS research, geophysics, and climatology. The program's faculty members have ongoing collaborative programs across disciplines such as biostatistics, bioinformatics, economics, atmospheric science, psychology and with the Missouri Department of Conservation.

The graduate program provides opportunities for graduate study and thesis direction in various areas of probability and statistics, both theoretical and applied. A variety of consulting and collaborative opportunities allow both faculty and graduate students to conduct cooperative and interdisciplinary research. Regular statistics colloquia provide opportunities for faculty and outside speakers to present the results of their research. Faculty and graduate students also participate in weekly seminar series in Bayesian statistics, bioinformatics, and biostatistics.

Degrees Available

- MA and PhD in statistics
- MA in statistics with emphasis in biostatistics
- Dual MA in statistics and economics

Career Opportunities

Statisticians are in demand in education, medicine, government, business and industry as well as in the biological, social and physical sciences.

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Facilities & Resources
The Department of Statistics maintains a state-of-the-art computer network with Linux workstations and servers for research and personal productivity software on PCs. Students have access to the network through PCs in student offices and through the statistics department computer laboratory. An extensive library of software including R, SAS, and common programming languages is maintained. Students also have access to the campus computing network. The Statistics Department is located in newly renovated space in Middlebush, with easy access to the main library's outstanding collection of books and journals in statistics.

Financial Aid from the Program
Fellowships and teaching and research assistantships are available to qualified graduate students. Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Statistics Faculty

Nancy Flournoy
chair, professor, PhD, University of Washington.

Paul L. Speckman
director of graduate studies, professor, PhD, University of California-Los Angeles.

Chong Zhuoqiong He
professor, PhD, Purdue University.

Jianguo Sun
professor, PhD, University of Waterloo, Canada.

Christopher K. Wikle
director of undergraduate studies, professor, PhD, Iowa State University.

Farroll T. Wright
professor, PhD, University of Missouri.

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Marco Ferreira
associate professor, PhD, Duke University.

Athanasios Micheas
associate professor, PhD, University of Connecticut.

Jing Qiu
associate professor, PhD, Cornell University.

Lori Thombs
director of the Social Science Statistics Center, associate professor, PhD, Southern Methodist University.

Min Yang
associate professor, PhD, University of Illinois-Chicago.

Sounak Chakraborty
assistant professor, PhD, University of Florida.

Subharup Guha
assistant professor, PhD, Ohio State University.

Scott Holan
assistant professor, PhD, Texas A&M University.

Lawrence Ries
associate chair, resident instruction associate professor, PhD, University of Missouri.

Application and Admission Information

Admission Criteria

- Fall deadline: January 15
- Spring deadline: October 15
- Minimum TOEFL score for international applicants: 535/200 (paper/computer)
- Minimum GPA: 3.0 in math and statistics courses to enter master's program; 3.5 in math and statistics to enter PhD program
- Bachelor's degree from accredited college or university in related area

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Undergraduate courses in statistics are recommended but not required. Consideration also is given to rank in graduating class, trends in grade records, maturity and experience, and other criteria bearing on qualifications.

Before entering the graduate program, a student should have a background that includes matrix theory and calculus and some exposure to statistics. Some required courses at the 7000 level not taken as an undergraduate may be taken for graduate credit as part of the graduate program.

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Program:

- Departmental application
- 3 letters of recommendation (use departmental form)
- Letter of intent
- GRE score report

Master of Arts in Statistics

Degree Requirements

The general requirements for receiving a master's degree are at least 30 semester hours of course work at the 7000 level or higher, of which at least 18 hours must be from the Department of Statistics at MU. The 30 hours may not include credit hours of 7050, 7510, 7530 or 7710 or more than a total of six hours of 8090.

At least 15 semester hours of course work at the 8000 level or above must be taken from the Department of Statistics at MU. The 15 semester hours cannot include more than a total of three hours of 8090.

Additional courses recommended but not required are Statistics 7110, 7310, 7410, 7420, 7430, 7450, 7610, 7810, 7830, 7850, 7870, 8310, 8320, 8370, 8410, 8640, 9250, 9310, 9320, and 9410; Mathematics 7700 and 7900; Computer Science 1050 or 2050.

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Remedial Courses
The following courses are required if equivalent courses were not taken as an undergraduate: Mathematics 7140, Statistics 7750 and 7760. These courses may not be used for more than six of the required 30 hours.

Original Written Work
All candidates must submit a written report on an independent effort toward producing original work. This report may, with the adviser's consent, take the form of a thesis, a written review on a set of papers in statistics, or a written report on an independent study project, which may include an original application of statistics. For this work, a student must register for at least three semester hours of 8090.

Presenting the Work
All candidates are required to present an open seminar on the results of the written report. The report should be made available for public review, through the Department of Statistics office, for at least one week before the examination.

Examination
The MA examination covers material presented in the written report and the seminar and may also cover course work.

Satisfactory Progress
Length of Study
A master's candidate is expected to complete the master's degree within three calendar years beginning with the first semester of enrollment unless approval is obtained from the graduate faculty of the Department of Statistics.

Grade Requirements
Any student, while a graduate student in this program, who receives a grade of C or lower in six or more hours of courses offered by the Department of Statistics or a grade of C or lower in nine or more hours of all courses taken will be dismissed from the graduate program unless contrary action is taken by the graduate faculty of the department.

For each credit hour over three hours with a grade of C or lower in courses offered by the Department of Statistics at the 7000 level and above, the student must receive a credit hour with a grade of A in

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courses offered by the department at the 7000 level and above.

MA in Statistics with Emphasis in Biostatistics

Students who wish to specialize in biostatistics may obtain a degree with special emphasis. The general requirements are the same as those for the MA degree in statistics. In addition, students must satisfy the following:
(i) Take statistics 7410 and (ii) either 7420, 8410 or 9410 or the equivalent;
(ii) Submit a project or thesis related to biostatistics.

Dual Master's Degree in Economics and Statistics

The department offers a cooperative MA degree with the Economics Department. Students may obtain MA degrees in economics and statistics with 48 hours of course work numbered 7000 or higher from the University of Missouri instead of the 52 or more required for separate degrees. (These 48 hours may not include any of the following: Economics 7351, 7353, or Statistics 7510, 7530, 7710.) Eighteen or more hours are required from the Department of Economics. At least 15 hours must be numbered 8000 or higher with no more than four hours of 8090. Students must take the core economics courses 8451 and 8453 and research workshop 8413 (2 credit hours). Eighteen or more hours are required from the Department of Statistics. At least 15 hours must be numbered 8000 or higher with no more than three hours of 8090. Statistics 7750 and 7760 and Mathematics 7140 are required if equivalent courses were not taken as an undergraduate.

All candidates must submit a thesis or written project demonstrating an independent effort towards producing original work satisfactory for each degree. The candidate may complete a separate theses/projects for both economics and statistics or a single joint thesis/project satisfying both requirements.

Master's Minor

To receive a designated minor in statistics for a master's degree, at least 12 credit hours of course work at the 7000 level or higher must be completed from the Department of Statistics at MU. The courses should be unified in theme and must be approved by the director of graduate

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studies in the Department of Statistics.

The courses must be completed with an average grade of B (3.0) or higher; shall not include Statistics 7002, 7070, 7085, 8085 or 9085; and shall not include more than one course from Statistics 7710 and 7750.

Doctorate in Statistics

Qualifying Examination

The Qualifying exam will be offered to students in the statistics department doctoral program or to masters students in statistics who are approved by the Admissions Committee. All graduate students who expect to be in the Ph.D. program must take the qualifying exam at the earliest possible time after completing the courses required for the exam. Any exceptions to these time limits must be obtained in writing from the Director of Graduate Studies with approval from the voting faculty. The qualifying exam will be offered two times per year, once at the beginning of the Fall semester (August) and once at the beginning of the Spring semester (January). The exam will consist of two parts, to be given on separate days. Each part will be designed to be completed within a four-hour period. Part I will cover Stat 7750 (Introduction to Probability Theory) and 7760 (Statistical Inference). Part II will cover Stat 8310 (Data Analysis I) and 8320 (Data Analysis II). Students who fail a part of the qualifying exam on the first try must take that part of the exam again the next time the exam is offered if they choose to continue in the Ph.D. program. On the second attempt, students are expected to take only the parts of the exam that they failed on the first attempt. In general, a student may attempt all or part of the exam at most two times. In rare and special situations, a student may appeal to the Director of Graduate Studies for a third attempt and be given the opportunity with approval from the voting faculty.

Doctoral Committee

Within one semester of passing the qualifying examination, a student must choose a doctoral program committee in consultation with his or her adviser. This committee consists of at least five members, at least three of whom are members of the doctoral faculty in statistics and at least one from another MU doctoral program.

Preliminary Examination

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Before taking the preliminary exam, the student is required to have passed the qualifying exams and chosen his/her major professor. Students must take the preliminary exam at the earliest possible time after the student has passed the qualifying exam and completed the courses required for the preliminary exam. Any exceptions to these time limits must be obtained in writing from the Director of Graduate Studies with approval from the voting faculty. The preliminary exam will be offered two times per year, once at the beginning of the Fall semester (August) and once at the beginning of the Spring semester (January). The exam will consist of two parts, to be given on separate days. Part I will cover Stat 9710 (Mathematical Statistics I) and Stat 9720 (Mathematical Statistics II), and part II will cover Stat 9310 (Theory of Linear Models). Part I will be designed to be completed in four hours and Part II will be designed to be completed in three hours. Students who fail a part of the preliminary exam on the first try must take that part of the exam again the next time the exam is offered if they choose to continue in the Ph.D. program. On the second attempt, students are expected to take only the parts of the exam that they failed on the first attempt. In general, a student may attempt all or part of the exam at most two times. However, if it is the student's second attempt and the student fails one or both parts of the exam, the voting faculty may, upon consideration of the exam performance and other information deemed relevant, vote that the student be allowed to take the failed portion(s) of the exam a third (and final) time.

Grading and Evaluating of the Qualifying and Preliminary Examinations

A "blinded" approach will be used when grading and evaluating the qualifying and preliminary examinations. Specifically, each student taking the exam will be given a unique ID that will be used throughout the entire grading and evaluating process. Each blinded part of the exam will be evaluated individually as pass or fail. The blinded method of evaluation will be strictly adhered to. That is, no conditional passes/fails will be given and no information other than the performance on the exam will be used to determine a pass or fail on each part of the examination.

Required Course Work

Before taking the comprehensive examination, students should complete six courses from the following: Statistics 9100, 9250, 9320, 9370, 9210, 9410, 9510, 9530, 9640, 9810 and 9820 taken at MU or at

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comparable institutions. (Different 9100s can be counted more than once.) Other courses may be substituted at the discretion of the student's doctoral program committee.

Comprehensive Examination

After successfully completing the preliminary exam and the required coursework, the student is eligible to take the comprehensive examination. This examination consists of a written and oral section as specified in the Graduate School catalog. This examination must be completed at least seven months prior to the final defense of the dissertation.

Dissertation

A dissertation, prepared under the direction of a dissertation supervisor, is required. The dissertation should be presented in an open seminar as part of the final examination, which is be conducted by the final examination committee. The dissertation should be made available for public review, through the Department of Statistics office, for at least one week before the examination.

Additional Requirements

Additional requirements for the PhD in statistics are determined by the student's program committee and the director of graduate studies.

PhD Minor

To receive a designated minor in statistics for a PhD degree, at least 15 credit hours of course work at the 7000 level or higher must be completed from the Department of Statistics at MU. The courses must include Statistics 8310 and 8320, but may not include Statistics 7002, 7020, 7050, 7070, 7085, 7510, 7530, 8085, 8090, or 9085. Students must have taken a calculus based mathematical statistics course at the level of Stat 7710 or 7760 or above, but no more than 6 hours of Stat 7710, 7750, and 7760 can be counted towards the 15 hours. The plan of study must be approved by the Director of Graduate Studies of the Statistics Department and be completed with an average grade of B (3.0) or higher. Each student is encouraged to seek approval of his/her plan of study as soon as possible.

Courses

See STATISTICS graduate courses in the myZou online system.

Teaching Fellowship Program (M Ed)

Contact Information

Shawna Nichols
218 Townsend Hall
Columbia, MO 65211
573-884-1850
http://education.missouri.edu/orgs/mper/fellows/index.php

About the Teaching Fellowship Program

The MU Teaching Fellowship is a rigorous induction program offered by the College of Education and the MU Partnership for Educational Renewal (MPER). Teaching Fellows are first-year teachers who work with a full-time mentor and complete a master's degree (M Ed) during that first year.

Admission Criteria

Fall deadline: N/A
Spring deadline: February 18

- Minimum GRE score: Preferred V+Q=810
- Minimum GPA: 3.0/4.0

Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Teaching Fellowship Program:

- Departmental application
- Cover letter
- 3 letters of recommendation
- Detailed résumé
- Official transcripts
- GRE score report
- Praxis Exam score report

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These criteria and materials apply to students who are not currently undergraduates at Mizzou. Please see the Fellowship Web site for more information.

END OF PROGRAM DESCRIPTION

Textile & Apparel Management

Contact Information

137 Stanley Hall
Columbia, MO 65211
573-882-7317
http://tam.missouri.edu/

About Textile & Apparel Management Graduate Programs

Graduate programs in textile and apparel management offer the following areas of study: apparel manufacturing management; apparel marketing and merchandising; e-commerce, supply chain management, economic/trade issues related to domestic and global textile and apparel industry; historical and cultural aspects textiles and dress; and consumer marketplace concerns.

Degrees Offered

MA and MS in textile and apparel management; and PhD in human environmental sciences with an emphasis area in textile and apparel management.

Careers

Career opportunities for graduates exist in many areas, such as higher education, industry analysis, museums, product development, production management and cooperative extension.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Textile and Apparel Management Faculty

Jana Hawley

department chair, professor, PhD, University of Missouri. Sustainability; textile recycling; cultural studies, e-commerce.

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Jung Ha-Brookshire
assistant professor, PhD, University of North Carolina-Greensboro. Textile and apparel industries; international trade; global sourcing and supply chain management.

Beth Harben
assistant professor, PhD, Auburn University. Cause marketing; consumer behavior; and electronic commerce.

Pamela S. Norum
associate professor, PhD, Cornell University. Consumer consumption behavior; spending patterns; and retailing.

Laurel E. Wilson
professor, PhD, University of North Carolina-Greensboro. History of textiles and apparel with a focus on the American West.

Admission Contact Information

Leona Nichols (nicholslm@missouri.edu)
137 Stanley Hall
Columbia, MO 65211
573-882-7317
http://tam.missouri.edu/academics_grad.html

Admission Criteria

Fall deadline: February 1
Spring deadline: June 1
Summer deadline: October 1

- Minimum TOEFL score: 550/213/79 (paper/computer/internet)
- Minimum GRE score: 500 minimum on each section
- Minimum GPA: 3.0 in last 60 hours
- Bachelor's degree from an accredited college or university in textile and apparel management or related field. Those with unrelated majors will need to do make-up work.

Required Application Materials

To the Graduate School

- All required Graduate School documents
- Statement of professional objectives (upload to application)

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- Departmental application (upload to application or send directly to department)
- Three letters of recommendation (upload preferred, or send directly to department)
- GRE scores
- TOEFL scores if international student

Courses

See Textile and Apparel Management (TAM) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Theatre Graduate Programs

Contact Information

College of Arts and Science
129 Fine Arts Center
573-882-2021
http://theatre.missouri.edu/

About the Department of Theatre

The MU Department of Theatre has a distinguished history that began shortly after 1900 when a small group of aspiring thespians resolved to enhance the cultural life of the campus by producing plays in an abandoned dining room in Lathrop Hall. In 1925, Professor Donovan Rhynsburger joined the MU faculty and established the Missouri Workshop Theatre. For over 75 years, the department has sustained a national and international reputation as a major center for theatre scholarship and dramatic art production. Theatre offers graduate and undergraduate programs.

A professional faculty comprises internationally recognized scholars and artists who develop the talents, skills and knowledge of students by teaching them to combine scholarship with craftsmanship. MU has consistently produced fine theatre and notable alumni, including Tennessee Williams, George C. Scott, Tom Berenger, Chris Cooper, Jon Hamm, Ethel Pitts Walker, and Barbara Molette. MU playwrights have won the prestigious David Library Award seven times, and departmental productions have been cited for national awards by the American College Theater Festival. In 2007 "Academic Analytics" ranked MU Department of Theatre #4 nationally for scholarly productivity in Theatre Literature, History, and Criticism (reported in Chronicle of Higher Education, November 11, 2007). The department is proud of its legacy of artistic excellence and the enrichment it brings to the cultural life of the campus and community.

Facilities

Rhynsburger Theatre. Named after Donovan Rhynsburger, MU's principal theatre for dramatic productions is in the Fine Arts Building, which also houses the music and art departments. The 278-seat

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proscenium theatre has a large stage and fly system with well-equipped costume and scenic shops located adjacent to the stage. The theatre houses faculty offices, classrooms, shops, dressing rooms and other production support spaces. Students interested in lighting and sound production will find a variety of equipment and modern control systems on which to learn their craft. We're also thrilled to announce the addition of a new, state-of-the-art professional computer graphics lab in 2000.

Corner Playhouse. The Corner Playhouse provides an opportunity for students and faculty to present smaller, more experimental productions in a flexible space. Seating up to 125, the theatre is designed to accommodate any stage configuration. Across the street from the Rhynsburger Theatre, the Corner Playhouse also houses dressing rooms, graduate student offices and classrooms.

Degrees Offered

- Master of Arts in Theatre
- Doctoral Degree (PhD)

Theatre Faculty

Clyde Ruffin
chair and professor, MFA, University of Iowa.

Cheryl Black
associate professor, PhD, University of Maryland-College Park.

Patrick Atkinson
emeritus professor, MFA, Illinois State University.

Suzanne Burgoyne
professor, PhD, University of Michigan.

Albert J. Devlin
professor, PhD, University of Kansas.

James Miller
professor, MFA, University of Southern Mississippi.

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David Crespy
associate professor, director of undergraduate studies, PhD, City University of New York.

M. Heather Carver
associate professor, director of graduate studies, PhD, University of Texas-Austin.

Kevin Brown
PhD, University of Colorado.

Dean Packard
technical director/adjunct associate professor, MFA, University of Iowa.

Kerri Packard
costume director/adjunct associate professor, MFA, University of Iowa.

Satisfactory Progress: General Guidelines for MA and PhD in Theatre

Probationary Status

The following constitute grounds for placing a student on departmental probation:

A grade of C or below in any departmental course taken for graduate credit will result in probationary status. A grade of incomplete in any course will result in probationary status for the subsequent semester. Incomplete grades must be changed to a grade of A or B by the end of the probationary semester (dissertation research incompletes are evaluated as S/U until the dissertation is defended). Failure to comply in a satisfactory manner with all responsibilities related to graduate assistantships. Graduate students in our department are expected to conduct themselves in a manner reflecting the university's commitment to professional integrity, collegiality, and good citizenship. Students who consistently fail to conduct themselves in this manner may be subject to probation or dismissal. In the case of each student on departmental probation, the director of graduate studies will confer with the adviser (in the case of an MA student), or the members of the program committee (in the case of a PhD student) to determine the grounds for removal of probation, and will communicate this decision to the student.

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Annual Review

Each spring semester the director of graduate studies convenes the Graduate Studies Committee to review the progress and performance of all graduate students.

Each graduate student in residence should meet with his or her adviser within the first two weeks of each semester to determine whether satisfactory progress has been maintained, and the adviser shall report the results of this meeting to the director of graduate studies.

Losing & Regaining Financial Support

Termination of departmental financial support will result if the student is considered to be making unsatisfactory progress and the student's program may be terminated. Departmental financial support may be restored when the student has made satisfactory progress toward a graduate degree for one semester, has made an A or a B in all incomplete courses, and is judged to be off probation by the director of graduate studies.

Application and Admission Information - Master of Arts in Theatre

Admission Contact Information

Marsha Miller (millermt@missouri.edu)
129 Fine Arts Building; Columbia, MO 65211
573-882-8281
http://theatre.missouri.edu/gradprogram/index.html

Admission Criteria

- Fall deadline: January 15. We only admit once a year, barring extraordinary circumstances.
- Minimum TOEFL score: 650/280 (paper/computer)
- Minimum GRE score: 600 -550-5.0
- Minimum GPA: 3.0 in the last 60 hours

Probationary admission is possible. The director of graduate studies will advise the student in writing of what must be done to change the probationary admission to regular admission.

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Required Application Materials

To the Graduate School:

- All required Graduate School documents

To the Theatre Program:

- 3 letters of recommendation
- GRE score report
- Statement of purpose
- Scholarly writing sample

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Curriculum Requirements

The degree of Master of Arts in Theatre will be awarded upon completion of the curriculum outlined below with a GPA of 3.0 or better.

Completed Undergraduate Curriculum

Most students have completed this course of study before seeking admission to MU. However, applicants holding undergraduate degrees in disciplines other than theatre will be asked to complete those courses, which were not part of their undergraduate curriculum. In some cases professional theatre experience may substitute for certain courses. Twelve courses in the undergraduate curriculum should be distributed as follows:

Basic skills: at least one course in each of the following: voice and articulation, movement for the stage, script analysis, technical theatre; At least one upper-division course in each of the following: acting, directing, dramatic literature, theatre history; at least two upper-division courses in technical theatre; and two upper-division theatre electives.

Graduate Curriculum

The student must complete at least 24 graduate hours while in residence as a graduate student at MU. The academic program should be established in consultation with an adviser not later than the end of the first full semester of residence. No more than six semester hours of graduate work may be transferred from another university. The

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student submits Form M-1, Application for Degree of Master of Arts to the Graduate School listing the courses to be taken to complete the graduate curriculum.

Independent Project
Each candidate for the MA must complete an independent project, which should be specified on the M-1 form as part of the plan of study.

There are three options:
1. This may be a thesis, for which up to six semester hours of credit in Theatre Research may be earned.
2. Another option is to write an original play, translate a play, or complete a project in acting, design, dramaturgy, or directing. Credit of up to three semester hours may be earned in a graduate Problems course.
3. A student may devise and successfully execute a research project to earn three semester hours in a Graduate course in independent Research.

Master's Final Examination
Master's degree students who have been maintaining satisfactory progress toward a degree for a period of 24months are expected, barring unusual and extenuating circumstances, to be prepared to write the master's final examination.

Each candidate for the MA is required to pass a final examination to demonstrate mastery of the fundamental principles of the work included in the course of study. An examining board consisting of at least three members of the faculty shall administer the examination.

In consultation with his or her adviser the student selects four areas for examination from among those listed below:

At least two but no more than three areas may be selected from among:
- Theatre History and Historiography
- Dramatic Literature and Criticism
- Dramatic and Performance Theory
- Performance Studies and Writing for Performance

At least one but no more than two areas must be selected from among:

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- History, Theory or Pedagogy of Acting
- History, Theory or Pedagogy of Directing
- History, Theory or Pedagogy of Theatrical Design
- History, Theory or Pedagogy of Playwriting/Writing for Performance

Length of Exam
Two hours are allotted for answering the question(s) for each area, making a total of eight hours for the examination.

Notifying the Graduate School of Results
As soon as the performance on the Master's Final Examination has been evaluated, the student's adviser informs the Graduate School, using the appropriate M-form.

If one area examination is unsatisfactory, the examining board will give the student an oral examination on that area, with special emphasis on the questions or questions missed. If two area examinations are unsatisfactory, the student is failed.

Doctorate in Theatre

Admission Contact Information
Marsha Miller (millermt@missouri.edu)
129 Fine Arts Building; Columbia, MO 65211
573-882-8281
http://theatre.missouri.edu/gradprogram/index.html

Admission Criteria
- Deadline: January 15. We only admit once a year, barring extraordinary circumstances.
- Minimum TOEFL score: 650/280 (paper/computer)
- Minimum GRE score: 600-550-5.0
- Minimum GPA: 3.0 in the last 60 hours
- GPA of 3.5 or better in master's program

Required Application Materials
To the Graduate School:
- All required Graduate School documents

To the Program:
- 3 letters of recommendation

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- GRE score report
- Statement of purpose
- Scholarly writing sample
- Professional resume or portfolio
- Creative (dramatic) writing samples

Financial Aid from the Program
Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program Web site or ask the program contact for details.

Careers
The doctorate in theatre at MU aims to provide knowledge and research skills necessary to launch the successful student on a career of scholarly and artistic investigation of theatre history, performance theory and criticism, performance studies, playwriting and other modes of writing for performance (such as adaptation and translation), dramaturgy, performance and theatre pedagogy.

Qualifying Examination
During the first semester of residence, the student completes a qualifying examination. The Graduate Affairs Committee of the Department of Theatre evaluates the examination and meets with the student to discuss the student's production experience, academic background, career goals and research interests. The Graduate Committee may waive the qualifying exam for students with an MA from MU who performed with distinction on the Master's Final Examination, or other students, depending on their previous MA or MFA records. In cases of exemption from written examination, students will meet with the graduate committee in their first semester for an oral review and discussion of their proposed course of study. The adviser submits the D-1 form, Qualifying Process/Confirmation of Adviser, reporting on the departmental qualifying process.

Advisory Committee: Form D-1
Doctoral Program Committee asks the graduate dean to approve a committee of fi ve graduate faculty members to help the student plan and carry out a program. One member of the Doctoral Program Committee must come from outside the Department of Theatre.

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Program Planning

As early as is practical, usually in the student's second semester on campus, the student should meet with the Doctoral Program Committee to plan a doctoral program.

The student should prepare a trial plan in consultation with the faculty adviser who serves as chair of the Doctoral Program Committee and reports the approved plan of study to the graduate dean on Form D-3: Doctoral Plan of Study.

Theatre Department Course work

Although the Graduate School requires no specific number of hours of class work, the Department of Theatre typically requires students entering the program with a master's degree to complete about 40 semester hours of graduate level course work in the theatre department, including three semester hours of Dissertation Research, devoted to writing a dissertation prospectus. For more specific information regarding required coursework, see http://theatre.missouri.edu/gradprogram/index.html.

Doctoral Minor

The department also requires the student to complete a doctoral minor, a nine-semester-hour unified area of study outside the Department of Theatre.

Research Tool Options

The Phd in Theatre also includes a research tool requirement which may be satisfied in several ways:

1. Option One: Present evidence of translation ability in each of two foreign languages in one of the following ways:
   by receiving an acceptable score on a GFSLT Humanities examination if the language is French, German or Spanish (Acceptable scores at this time are: French 570, German 560 and Spanish 540) by receiving certification of competence from a qualified examiner if other languages are presented by showing on one's transcript a grade of B or better on a literature course at MU. (This course must require reading of works in the foreign language. The course may be taken during the doctoral program or within the five years prior to beginning the program.)

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2. Option Two: Demonstrate a high degree of fluency in one foreign language by individual examination conducted by the appropriate language department at MU.

3. Option Three: Choose one language and one block of courses. Demonstrate translation ability for one language as in Option One. Complete with grades of B or better six semester hours in graduate courses taken outside of the department that represent a coherent unit of study, providing a research tool applicable to the candidate's dissertation research.

4. Option Four: Choose two blocks of courses. Complete with grades of B or better two blocks of course work of six hours each in graduate level courses taken outside of the department that must represent to the candidate's advisory committee a coherent unit of study. One or both blocks should provide a research tool for the candidate's dissertation.

Participation in Productions

The doctoral student is encouraged to participate in University Theatre and studio theatre productions and may, in some cases, be required to do so. Academic credit is available.

Dissertation Proposal/Prospectus

Before comprehensive exams may be scheduled, students will be required to complete a 5-page Dissertation Proposal, concisely but clearly expressing the purpose, justification, method and general organizational plan for the dissertation. A bibliography is also required (bibliography is not included in 5 pp. minimum). The theatre department faculty members on student's doctoral committee must approve this proposal. After successful completion of comprehensive exams, the student will expand the dissertation proposal into a Dissertation Prospectus — a more detailed and thorough description of the dissertation project. The prospectus should provide a clear statement of the purpose of the dissertation, describe the need for the knowledge the dissertation report will supply, outline the research questions and demonstrate the procedures by which the scholar will answer these questions. The candidate will present the prospectus to the Doctoral Program Committee and will be prepared to defend it.

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Satisfactory Progress Before the Comprehensive Exam

Each semester prior to the semester in which comprehensive examinations are taken, satisfactory progress is maintained when a student completes nine semester hours of graduate level work with a grade of B or above. Incomplete grades are given only under extraordinary circumstances and with the approval of the Graduate faculty. Doctoral students who have been maintaining satisfactory progress toward a degree for a period of 36 months are expected, barring unusual and extenuating circumstances, to be prepared to write comprehensive examinations.

Comprehensive Examination

After completing the research tool option, a substantial amount of the course work and after obtaining the approval of the 5-page proposal from the Doctoral Program Committee, the student takes the comprehensive examination. The comprehensive examination provides an opportunity for the student to demonstrate a thorough grasp of the history and principles of theatre. The examination provides the Doctoral Program Committee with a window looking back upon the student's training as well as a chance to estimate the student's potential as a problem solving scholar of theatre. Readers of the examination look for more than a reiteration of the content of standard sources of information about dramatic art. The examinee should demonstrate an ability to analyze problems and data, to formulate theses or points of view, and to locate, evaluate and organize evidence to support a contention-the essential skills of scholarship. The comprehensive examination in theatre allows candidates not only to tell what they know but also to demonstrate what they can do with information. Comprehensive exams are scheduled once each semester, during the first third of the current semester.

Stages of the Comprehensive Exam

The examination is given in two stages.

Stage One consists of a written examination, over the history of theatre, dramatic theory, criticism, writing for performance, performance studies, and theatre pedagogy, and an examination, usually written, consisting of one or two questions posed by the outside member of the Doctoral Program Committee. The examination is evaluated by the student's Doctoral Program Committee, which decides whether or not the student should be advanced to the oral examination.

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Stage Two is the oral examination administered by the Doctoral Program Committee. This examination provides an opportunity for the student to correct, amend, or defend assertions made in the written examination, although the oral examination is not bound by any limits established by the written examination. Ordinarily of two hours duration, the oral is also an opportunity for the student to demonstrate skill in oral explanation and argument.

Criteria for Passage of the Comprehensive Exam

The result of the comprehensive examination shall be marked pass if all or all but one of the Doctoral Program Committee members recommend a pass on the entire examination, both written and oral sections. Should the examination be marked fail, the committee may recommend that the candidate retake the examination after a minimum period of 12 weeks. A report of the committee's decision (Form D-3), carrying the signatures of all members of the committee, is sent to the Graduate School and to the student no later than two weeks after the comprehensive examination is terminated.

If a failure is reported, the committee also must include in the report an outline of the general weaknesses or deficiencies of the student's work. The student and the committee members are encouraged to work together to identify steps the student might take to become fully prepared for the next examination. If at any time the student believes that the advice given by the committee is inadequate, the student may send a written request for clarification to the committee. A copy of this request should be sent to the Graduate School. The committee must respond to this request in writing within two weeks with a copy to the Graduate School. Failure to pass two comprehensive examinations automatically prevents candidacy for the doctorate in theatre at MU.

Satisfactory Progress During and After Comps

For the semester in which comprehensive examinations are taken and in semesters after comprehensive exams and orals are passed, satisfactory progress is maintained when, in the judgment of the student's dissertation adviser, the student is making satisfactory progress toward completion of the dissertation.

Students who leave MU having completed all but the dissertation must maintain continuous enrollment by registering for two semester hours

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of Dissertation Research each fall and spring term and one hour in the summer term. Failure to register negates a student's candidacy.

Graduate School Regulations on Satisfactory Progress
The Graduate School regulations regarding a reasonable rate of progress for doctoral students are as follows:

Enrolled During or After Fall 2000
Effective for students beginning their doctoral studies during or after Fall Semester 2000, a PhD student must successfully complete the comprehensive exam within a period of five years beginning with the first semester of enrollment as a PhD student. Individual departments or area programs may stipulate a shorter time period. For an extension of this time limit, the student must petition the Graduate School by submitting a request to the adviser, who, in turns, submits, via the departmental director of graduate studies, a written recommendation to the Graduate School.

All requests for extensions should be endorsed by the departmental director of graduate studies and should be accompanied by a description of the process whereby currency in the discipline is certified, if required by the department.

Completing the Dissertation
The final step is completion and approval of the doctoral dissertation. The director of graduate studies can provide the student a copy of Guidelines for Preparing Theses and Dissertations.

Formatting
Dissertations in the Department of Theatre should be formatted according to the latest edition of A Manual for Writers of Term Papers, Theses, and Dissertations, ed. Kate L. Turabian or the MLA Handbook; the chosen format must meet with the dissertation advisor's approval.

Graduate School Paperwork
Form D-4, Report of the Doctoral Dissertation Defense, indicates that the student has defended the dissertation at an oral examination.

Advisory and Committee Approval of the Dissertation
No draft of the dissertation can be considered a final draft until the

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adviser (First Reader) has approved it. All dissertation committee members must have at least 10 days to read the dissertation before the last date for oral examination as published by the Graduate School. Unanimous approval of the dissertation by four committee members constitutes satisfactory completion of this examination.

Courses

See Theatre (THEATR) graduate courses in the myZou online system.

END OF PROGRAM DESCRIPTION

Women's & Gender Studies Graduate Minor

Contact Information

Women's & Gender Studies
325 Strickland Hall
573-882-2703
http://wgst.missouri.edu/
Elisa Glick, graduate advisor, WGST Department
Jackie Litt, chair, WGST department

About The Women's and Gender Studies Department

The Women's and Gender Studies Department is committed to the interdisciplinary, feminist study of the social, cultural, and historical processes that gender human identity. Central to the department's mission is the conviction that the study of cultures, and representations cannot be separated from the study of women and gender, and that gender and sexuality are fundamental categories of analysis in all disciplines. In recognizing that the construction of these categories is contingent on time and place, the department stresses scholarship and teaching that are broadly comparative and range across multiple cultures, national and transnational contexts, and historical moments. Its faculty employ a broad range of theoretical approaches and methods that help students to integrate women's, gender, and/or queer studies with analyses of race, ethnicity, religion, spirituality, nationality, and class, and to think critically and synthetically about the multiple axes of power through which sexual and gendered identities are constructed. Courses encourage students to analyze the world in which they live, in order that they might act to transform it.

Eligibility

The Women's and Gender Studies Graduate Minor is available to all students pursuing a graduate degree at MU.

Plan of Study

15 credit hours will be chosen to complement the student's main area

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of graduate study. Students may take up to six hours in their home department. The minor requires the following six credit hours:

- WGST 8020 Seminar: Feminist Theory or a comparable 8000 or 9000-level seminar in feminist theory offered through Women's and Gender Studies, History, Sociology, Political Science or English.
- WGST 8040 Seminar: Problems and Issues in Feminist Scholarship.

For lists of permanent courses, topics courses and recent offerings, visit http://wgst.missouri.edu/graduate/index.html.

Women's and Gender Studies Faculty

Rebecca Dingo
assistant professor of women's and gender studies and English, PhD, The Ohio State University.

Elisa Glick
graduate advisor and associate professor of women's and gender studies, and English, PhD, Brown University.

Jackie Litt
chair of women's and gender studies, associate professor of women's and gender studies, PhD, University of Pennsylvania.

Tola Olu Pearce
professor of sociology, and women's and gender studies, PhD, Brown University.

Mary Jo Neitz
professor of women's and gender studies, PhD, University of Chicago.

Srirupa Prasad
assistant professor of women's and gender studies and sociology, PhD, University of Illinois Champaign-Urbana.

Enid Schatz
director of social science research and assistant professor, occupational therapy, and women's and gender studies, PhD, University of Pennsylvania.

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Rebecca G. Martinez
assistant professor of women's and gender studies, PhD, University of California, Irvine.

Affiliate Faculty

Kim Anderson
associate professor of social work, PhD, University of Kansas.

Jennifer Stevens Aubrey
assistant professor of communication, PhD, University of Michigan.

Anna Bardone-Cone
assistant professor of psychological sciences, PhD, University of Wisconsin-Madison.

Aliki Barnstone
professor of English, PhD, University of California, Berkeley.

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associate professor of religious studies, PhD, Yale University.

Lesa Beamer
associate professor of biochemistry, PhD, Johns Hopkins.

Lissa Behm-Morawitz
assistant professor of communication, PhD, University of Arizona.

Cheryl Black
associate professor of theatre, PhD, University of Maryland.

Mary Kay Blakely
associate professor of journalism, MA, Northern Illinois University.

Suzanne Burgoyne
professor of directing, script analysis, and theater of the oppressed, Catherine P. Middlebush Chair of Fine & Performing Arts, PhD, University of Michigan.

M. Heather Carver
associate professor of theatre, PhD, University of Texas at Austin.

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Rita Cavigioli
associate professor of romance languages and Italian, PhD, University of California-Los Angeles.

Melissa Click
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associate professor of journalism, and women's and gender studies, MS, University of Missouri.

Marilyn Coleman
Curators' Professor of human development and family studies, EdD, University of Missouri.

Angela Curl
assistant professor of social work, PhD, Case Western Reserve University.

June L. DeWeese
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Arvarh E. Strickland Distinguished Professor of African-American history and culture, PhD, Indiana University.

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Curators' Professor of English and women's and gender studies, PhD, Indiana University.

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Devoney Looser
associate professor of English, PhD, State University of New York at Stony Brook, with certification in Women's Studies.

Renata Maiorino
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professor of religious studies and women's and gender studies, PhD, Vanderbilt University.

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Michael Yonan
assistant Professor of Art History, PhD, University of North Carolina at Chapel Hill.

For additional information about the Women's & Gender Studies Graduate Minor, visit http://wgst.missouri.edu/graduate/index.html.

Courses

See Women's & Gender Studies (WGST) graduate courses in the myZou online system.

END OF WOMEN'S & GENDER STUDIES GRADUATE MINOR SECTION