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# **The University of Mississippi**

## **Fall 2012 Graduate School Catalog**

John Z. Kiss, DEAN

Christy M. Wyandt, ASSOCIATE DEAN

The Graduate House  
The University of Mississippi  
University, MS 38677

Telephone: 662-915-7474

Fax: 662-915-7577

Website: <http://www.olemiss.edu/gradschool/>

Email: [gschool@olemiss.edu](mailto:gschool@olemiss.edu)

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This catalog is not an unchangeable contract but, instead, an announcement of present policies only. Implicit in each student's matriculation with the university is an agreement to comply with university rules and regulations that the university may modify to exercise properly its educational responsibility. The policies of the Graduate School are recommended by the Graduate Council and approved by the chancellor. When exceptions to policy, procedures, or deadlines are justified, the Graduate Council authorizes the graduate dean to take appropriate action.

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## **Academic Calendar**

The academic calendar of the University of Mississippi is available online at [www.olemiss.edu/depts/registrar](http://www.olemiss.edu/depts/registrar) or from the Registrar's Office, 662-915-7792.

## **The University of Mississippi Mission Statement**

### **VISION**

The University of Mississippi strives to be a great, comprehensive, public institution of higher learning.

### **MISSION**

The University of Mississippi is a public, comprehensive, research institution that exists to enhance the educational, economic, health care, social, and cultural foundations of the state, region, and nation. As the oldest public institution of higher learning in the state and as a Carnegie Research University (high research activity), the institution's primary functions are the creation, dissemination, and application of knowledge through a variety of undergraduate, graduate and professional programs, and public service activities. The university's main campus at Oxford emphasizes a traditional, residential educational experience, with a central College of Liberal Arts and professional schools of Accountancy, Applied Sciences, Business Administration, Education, Engineering, Law, and Pharmacy. Through its breadth of academic and research programs and its strong liberal arts tradition, the Oxford campus serves the educational needs of the entire state and also attracts a high percentage of out-of-state students. The university's regional campuses in Tupelo and Southaven emphasize professional offerings and serve adult and traditional learners in North Mississippi. The University Medical Center in Jackson includes the University Hospitals and Clinics as well as schools of Medicine, Nursing, Health Related Professions, Dentistry, and Graduate Studies.

The university educates students to assume leadership roles in the state, nation, and world through its nationally recognized programs of undergraduate, graduate, and professional study. Its teaching, research, and service missions are characterized by equal access and equal opportunity to all who qualify.

### **COMMITMENTS**

**Teaching:** The university will provide excellent, student-centered academic and co-curricular programs. Our goal is to produce graduates who have the breadth and depth of knowledge to be lifelong learners, to be successful in their discipline, and to be good citizens. Instruction builds upon a central College of Liberal Arts, the foundation of the institution, with its programs through the doctorate in the natural sciences, humanities, social sciences, and the arts. Our professional schools provide programs, including continuing education programs, for preparing the following: K-12 and higher education teachers and administrators; lawyers and legal professionals; engineers in a variety of specialty areas; accountancy and business professionals; pharmacists and pharmaceutical science researchers, health care and applied human sciences professionals. Academic programs also include the Sally McDonnell Barksdale Honors College, the Lott Leadership Institute, and the Croft Institute for International Studies. The Medical Center programs train health care professionals at the first professional, graduate, and postgraduate levels.

**Research:** The university will produce research and scholarship that is nationally recognized and supports the economic, health care, and cultural development of the state, the region, and the nation. The mission to generate new knowledge extends to the sciences, humanities, social sciences, engineering, business, accountancy, applied sciences, educational pedagogy, biomedical sciences, and health care areas. Research centers of national prominence include the National Center for Natural Products Research, the Center for Pharmaceutical Marketing and Management, the National Center for Physical Acoustics, the Center for the Study of Southern Culture, the National Center for Computational Hydroscience and Engineering, the National Center for Justice and the Rule of Law, the National Center for Remote Sensing, Air and Space Law, and the National Institute for Undersea Science and Technology in Oxford, and the Jackson Heart Study, the Center for Excellence in Cardiovascular-Renal Research, and the Center for Excellence in Women's Health at the Medical Center.

**Service:** The university will be a leader in providing service to the public, through the application and dissemination of its expertise and knowledge, in Mississippi, the region, and the nation. This public service function is fulfilled through a variety of outreach programs involving almost all academic disciplines and extending across Northern Mississippi, with branch campuses in Tupelo and Southaven, and reaching statewide and beyond in some cases. Prominent among our service/outreach programs are the Barksdale Reading Institute, the National Food Service Management Institute, and the William Winter Institute for Racial Reconciliation. The Medical Center seeks to raise the health level of Mississippians by providing exemplary patient care and by responding to community needs through continuing health care education, outreach programs, and cooperative partnerships.

Additionally, the university is committed to

- Developing diverse campuses that recognize and promote the value of individual differences;
- Providing the highest quality educational support services and modern health care technologies to enhance the learning and patient care environments;
- Maintaining efficient and effective administrative services to support its basic functions;
- Supporting and developing a highly qualified faculty and staff; and
- Leveraging its strengths and expertise by developing interdisciplinary programs within the institution and partnerships with other IHL institutions for the benefit of the university and the state.

## The Graduate School

The University of Mississippi offers a variety of master's, specialist, and doctoral degree programs. The Office of the Graduate School provides leadership, coordination, and administrative structure to support all graduate programs at the university.

**Graduate School Office** • Dean John Kiss manages the Graduate School office in the Graduate House. Among the duties of the office are to receive applications, coordinate their review, communicate with prospective students regarding their admission status, maintain academic records, monitor students' progress, process assistantship appointments, advise students, and interpret academic policies established by the Graduate Council.

**Graduate Council** • The Graduate Council has broad responsibility for advising on all graduate academic policies and activities of the university on its Oxford campus and satellite campus locations (excluding the Medical Center). This includes the consideration of new degree programs, formulation and refinement of graduate regulations, consideration of all graduate and law courses for approval and decisions on petitions from students who are requesting waivers of campus-wide (as opposed to departmental or school) graduate degree requirements. The faculty representatives on this committee are tenured professorial faculty.

**Graduate Faculty** • The graduate faculty are those faculty members who are approved to teach graduate-level courses and direct or co-direct master's and doctoral students. The Graduate School office maintains a list of members.

**Graduate Student Council** • The Graduate Student Council at the University of Mississippi addresses the needs and concerns of all graduate students on the Oxford campus. The council officers and senate work with the faculty, administration, and other student organizations to promote higher academic achievement and standards, to facilitate interdepartmental communication among graduate students, and to provide graduate students with more opportunities for social interaction. By collectively addressing common concerns of its membership, the Graduate Student Council strives to eliminate much of the unnecessary stress often associated with graduate student life.

Some of the Graduate Student Council's goals are to offer financial assistance for paper presentations at academic conferences, to compile and disseminate information concerning graduate grants and scholarships outside the university, and to work with the university's placement office to establish a clearinghouse of information regarding career opportunities in academia and other professions.

**Accreditation** • The University of Mississippi is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools [1866 Southern Lane, Decatur, Georgia 30033-4097; telephone 404-679-4501] to award baccalaureate, master's, specialist, first professional, and doctoral degrees. The commission is to be contacted if evidence appears to support the university's significant noncompliance with a requirement or standard.

The Graduate School, which administers all graduate study at the university, holds membership in the Council of Graduate Schools in the United States. Its faculty consists of about 400 members, who are qualified to offer graduate work.

**History** • The University of Mississippi from 1848, the date of its formal opening, until 1870 conferred the honorary degree of Master of Arts upon certain of its graduates who had attained intellectual distinction. Courses at the graduate level were offered first in 1870. A comprehensive examination as a requirement for the master's degree also was established that year. A definite program of graduate study with a minimum residence requirement of one academic year was inaugurated in 1890. Since this beginning, graduate work at the University of Mississippi has been continually developed and expanded. The Graduate School was formally organized in 1927 to coordinate and administer graduate study and research at the university.

**Aims and Ends of Graduate Education** • The purpose of graduate education at the university was first articulated by the Aims and Ends statement associated with the organization of the Graduate School in 1927. The statement is as follows:

**The student who undertakes graduate study should understand at the outset that work of this character implies more than the acquisition of knowledge under competent instruction. He or she should aspire to a degree of knowledge of a given subject in order to make a contribution that is of original and independent value. This does not imply that much of the student's energies are not still to be applied in the acquisition of facts universally accepted, a process that should continue through life, but in graduate study these facts are to be weighed, coordinated, and supplemented by the student's own contributions.**

**Graduate Education Learning Outcomes** • The Graduate School of the University of Mississippi has master's, specialist, and doctoral degree programs. The general learning outcomes of these degrees are summarized as follows.

A student who completes a **master's degree** should

- demonstrate a mastery of a body of knowledge in the discipline; the level of the material and/or the extent of mastery must be above that for the baccalaureate degree;
- successfully use the basic methodologies of the discipline;
- retrieve, evaluate, and utilize information relevant to the discipline;
- communicate, both orally and in writing, in a manner and level of proficiency that is standard for the discipline;
- (for thesis master's) conduct research or produce creative work;
- (for nonthesis master's) function as a professional in the discipline.

A student who completes a **specialist degree** should be able to demonstrate the above competencies and should

- master a body of knowledge beyond that for a master's degree;
- function as a professional in the discipline.

A student who completes a **doctoral degree** should

- demonstrate broad and advanced knowledge within the discipline;
- successfully use a range of methodologies of the discipline;
- independently perform original research;
- communicate effectively;
- function as a professional in the discipline.

## Research Organizations, Academic and Community Services

### RESEARCH ACTIVITIES

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**Office of Research and Sponsored Programs** • Frederick A.P. Barnard Distinguished Professor Alice M. Clark, vice chancellor for research and sponsored programs • 100 Barr Hall • 662-915-7482 • [research@olemiss.edu](mailto:research@olemiss.edu)

Organized research units are maintained by the university to conduct research on practical and theoretical problems. Faculty, students, and staff participate in research efforts of organized research groups. For the most part, the studies conducted through the special research units complement the research accomplished by undergraduates for senior research projects in their major fields and by graduate students for theses and dissertations.

Opportunities exist for graduate students to participate in research being conducted by the university's research units. Interested students should contact the director of the center or institute in question. Most of the university's research centers, institutes, consortia, research programs and support facilities are listed below. For links to Web pages for these units, go to [http://www.olemiss.edu/depts/research/research\\_centers.html](http://www.olemiss.edu/depts/research/research_centers.html).

#### Centers

- Center for Advanced Infrastructure Technology
- Center for Applied Electromagnetic Systems Research
- Center for Archaeological Research
- Center for Community Earthquake Preparedness
- Center for Educational Research and Evaluation
- Center for Excellence in Literacy Instruction
- Center for Excellence in Teaching and Learning
- Center for Health Behavior Research
- Center for Manufacturing Excellence
- Center for Marine Resources and Environmental Technology
- Center for Mathematics and Science Education
- Center for Pharmaceutical Marketing and Management
- Center for Population Studies
- Center for Speech and Hearing Research
- Center for the Study of Southern Culture
- Center for Water and Wetland Resources
- Hearin Center for Enterprise Science
- Jamie Whitten National Center for Physical Acoustics
- National Center for Computational Hydroscience and Engineering
- National Center for Justice and the Rule of Law
- National Center for Natural Products Research
- National Center for Remote Sensing, Air and Space Law
- Public Policy Research Center
- Sarah Isom Center for Women's Studies
- Sino-U.S. Traditional Chinese Medicines Research Center
- The University of Mississippi Geoinformatics Center



## **Institutes**

- Barksdale Reading Institute
- Croft Institute for International Studies
- Institute for Advanced Education in Geospatial Sciences
- Institute on Education and Workforce Development
- Institute for Humanitarian De-Mining
- Lott Leadership Institute
- McLean Institute for Community Development
- Mississippi Hills Institute for Heritage Resource Management
- Mississippi Law Research Institute
- Mississippi Mineral Resources Institute
- National Food Service Management Institute
- National Institute for Undersea Science and Technology
- Research Institute of Pharmaceutical Sciences
- William Winter Institute for Racial Reconciliation and Civic Renewal

## **Consortia and Enterprises**

- Alliance for Graduate Education in Mississippi
- Enterprise for Innovative Geospatial Solutions
- Mississippi Consortium for Military Personnel Research
- Mississippi Space Grant Consortium
- North Mississippi Education Consortium

## **Research Programs and Initiatives**

- Intelligent Transportation Systems
- Laboratory for Applied Drug Design and Synthesis
- Mississippi Space Commerce Initiative
- National Sea Grant Law Center

## **Research Support Facilities**

- Access Grid Node
- Animal Care Facility
- Mississippi Center for Supercomputing Research
- Social Science Research Laboratory
- The University of Mississippi Field Station
- The University of Mississippi Research Park

## **ACADEMIC SERVICES**

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**Libraries** • Julia Rholes, dean of University Libraries • 312 J.D. Williams Library • 662-915-7092 • jrholes@olemiss.edu

The University Libraries include the John Davis Williams Library, located across from the Lyceum, and the Science Library, located in the Thad Cochran National Center for Natural Products Research building. The Science Library primarily serves the School of Pharmacy and the Department of Chemistry and Biochemistry. The J.D. Williams Library is the general library for the university community. It holds more than 1.9 million volumes and 2.4 million government documents including print, microforms, maps, and electronic media. The libraries also provide access to more than 140 electronic databases, 28,958 electronic journals, 375,666 electronic books, and more than 39,085 current periodical and serial subscriptions. Online electronic resources and services can be found on the website <http://www.olemiss.edu/libraries>.

In 2001, the J.D. Williams Library became “the library of the accounting profession” upon receiving the library collections of the American Institute of Certified Public Accountants (AICPA). These collections, numbering more than 100,000 items, include rare incunabula as well as copies of every item cited by *Accountant's Index* since its inception in 1923.

The Department of Archives and Special Collections holds more than 600 manuscript collections, and more than 46,000 volumes of Mississippiana are housed in this department. Among its exhibits are William Faulkner's Nobel Prize and first editions. The Seymour Lawrence Room, a gift of the late publisher, contains signed first editions, manuscripts, photographs, correspondence, and memorabilia of the dozens of authors he published. The Southern Media Archive and Visual Collections contains the images of generations of Mississippians and includes the collections of photographers Martin Dain and J.R. Cofield. Special Collections' Blues Archive houses the *Living Blues* Archival Collection and more than 60,000 sound recordings and personal collections of blues artists such as B.B. King. The Modern Mississippi Political Archive contains the papers of some of Mississippi's most well-known politicians.

The Law Library is located in the School of Law on the Oxford campus, and the Rowland Medical Library is located on the Jackson campus in the Verner S. Holmes Learning Resource Center.

**University Museum and Historic Houses** • University Avenue • 662-915-7073 • [museum@olemiss.edu](mailto:museum@olemiss.edu)

The museum complex consists of the Mary Buie Museum, the adjoining Kate Skipwith Museum, the Walton-Young Historic House, and Rowan Oak, William Faulkner's house. The Seymour Lawrence Gallery of American Art and the Fortune Gallery were added recently. The museum's collections represent the fields of archaeology, art, anthropology, decorative arts, history, science, and technology. Particularly outstanding are the David M. Robinson Collection, the finest collection of Greek and Roman sculpture, pottery, coins, and bronzes in the South, and the Millington-Barnard Collection of 19th-century scientific apparatus. The precision instruments in the Millington-Barnard Collection were the finest available in the 1850s when they were bought for teaching purposes, and the collection is among the most extensive and best-preserved assemblage of its kind in the United States.

The growing collection of Southern folk art, centered on the collection of the paintings of Oxford native artist Theora Hamblett, is also outstanding.

The University Museum regularly hosts significant traveling exhibitions from outside sources and prepares frequent special exhibitions from the permanent collections; many of these exhibitions are coordinated with classes or academic events such as the annual Faulkner symposium. The museum's classrooms and galleries are used for regularly scheduled classes and special events by many university departments. Only

a very small selection of the 15,000-piece collection can be displayed at any one time, but all the collections are available to students and faculty for study and research.

The Walton-Young House is a restored Victorian home. It was named in honor of Horace and Lydia Lewis Walton, who constructed the house, and Stark Young, a famous Mississippi playwright, drama critic, and author who was both a student and a faculty member at the university. This historic home was built in 1880 and is currently closed to the public for renovation.

Rowan Oak, William Faulkner's home, was recently restored and is open to visitors. A small admission fee is charged to non-student house visitors. The grounds are open from dawn to dusk, and the Bailey's Woods Trail is a challenging walk between Rowan Oak and the museum.

The University of Mississippi Museum is open to the public, 10 a.m.-6 p.m. Tuesday-Saturday. The museum and historic houses are closed on Mondays and university holidays. Most of the museum is free and open to the public with a fee for special exhibitions. Admission to special exhibitions is free to UM Museum members and Ole Miss students. Guided group tours are available by appointment. You may contact the museum for further information by calling 662-915-7073. Or email [museums@olemiss.edu](mailto:museums@olemiss.edu). Visit our website: [museum.olemiss.edu](http://museum.olemiss.edu).

**Gallery 130** • Located in Meek Hall, the gallery is used for art exhibitions and other activities of the Department of Art. Loan exhibitions of outstanding professional work in painting, sculpture, graphic arts, and photography are brought to the gallery at regular intervals. Exhibitions of successful student work are scheduled periodically.

**University Lectures** • In 1960, Mrs. Ann Waller Reins Longest established the Christopher Longest Lecture Fund in recognition of Professor Longest's distinguished service to the university from 1908 to 1951 in the departments of Classics and Modern Languages. The annual *Longest Lectures* are delivered by scholars in the fields of modern languages and English. This is the oldest endowed lecture series at the university.

In 1972, the students, colleagues, and friends of James Edwin Savage, professor of English, established the *James Edwin Savage Lectures* in honor of his contributions to teaching and scholarship in the Renaissance. The James Edwin Savage Lectures are given by outstanding scholars in the fields of Renaissance literature, art, history, music, and philosophy.

In 1973, the School of Pharmacy established the *Charles W. Hartman Memorial Lecture* to recognize the contributions of Charles W. Hartman, former dean of the School of Pharmacy, to the pharmaceutical sciences. Annually, an internationally recognized leader in pharmacy is selected to deliver the lecture.

The *Arch & Adine Dalrymple Lecture in Mathematics*, established in 1988, brings distinguished mathematicians to the university to speak on mathematics and mathematics research.

In 1998, the Department of Pharmacy Administration established the *Rachel and Winfield Cotton Lecture* to recognize Mr. Cotton's contributions to pharmaceutical wholesaling. The lectures are delivered by scholars in the fields of development and distribution of pharmaceutical products.

The School of Pharmacy established the *Coy W. Waller Distinguished Lecture* in 2004 as a way of recognizing Dr. Waller's contributions to his discipline and the School of Pharmacy. Each year the lecture is hosted by a department within the school. Lecturers are selected for their contributions to the host department's discipline.

In 2005, the Department of Medicinal Chemistry established the *Ronald F. Borne Distinguished Lecture in Medicinal Chemistry* to recognize Dr. Borne's contributions to the department. The lectures are delivered by scholars in the fields of medicinal chemistry and synthetic drug discovery.

Regular noon-time lectures are presented during the academic year by the Center for the Study of Southern Culture, the University Museums, and the Sarah Isom Center for Women. The College of Liberal Arts sponsors a monthly forum of speakers from its faculty. The Philosophy Department sponsors a monthly lecture and discussion series. Many university departments hold regular seminars featuring distinguished outside or local speakers.

### **OFFICE OF STUDENT DISABILITY SERVICES**

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Stacey Reycraft, director • 234 Martindale • 662-915-7128 • tty 662-915-7907 • sds@olemiss.edu • www.olemiss.edu/depts/sds

The University of Mississippi is committed to ensuring equal access to an education for enrolled or admitted students who have verified disabilities under Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (ADA), as amended. The office serves those with physical and nonphysical disabilities, including but not limited to learning disorders, attentional disorders, mobility, deafness/hard of hearing, blindness/low vision, and psychiatric and chronic illnesses. University policy calls for reasonable accommodations to be made for eligible students with verified disabilities on an individual and flexible basis. To review this policy, please visit the university's policy directory at <http://secure4.olemiss.edu/umpolicyopen/index.jsp>.

It is the responsibility of students with disabilities to seek available assistance from the university and to make their needs known in a timely manner by contacting the Office of Student Disability Services (SDS). A Student Request for Reasonable Accommodations/Modifications Intake Form must be completed and documentation from a licensed health care professional must be submitted before eligibility for accommodations can be confirmed. For a copy of the intake form, or for additional information, contact the staff at the SDS office.

### **TECHNOLOGY SERVICES**

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**Outreach and Continuing Education** • E.F. Yerby Conference Center • 662-915-7283 • [outreach@olemiss.edu](mailto:outreach@olemiss.edu) • [www.outreach.olemiss.edu](http://www.outreach.olemiss.edu)

The Division of Outreach and Summer School operates distance education rooms for transmitting and receiving compressed video. Distance education rooms also exist in the schools of Business Administration, Education, and Pharmacy and at the UM Advanced Education Center in Tupelo, the DeSoto Center in Southaven, and UM Booneville.

**Information Technology** • Dr. Kathy Gates, chief information officer • 302 Powers Hall • 662-915-7206 • [it@olemiss.edu](mailto:it@olemiss.edu) • <http://www.olemiss.edu/depts/it>

The Office of Information Technology (IT) offers the campus community a wide array of resources, including high-performance computing systems, email accounts and Web hosting services, public computing labs, personal computer support, and a number of online services such as Blackboard and Web-based registration for classes. A comprehensive campus network connects the university to the Internet and Internet2, and many areas are wireless-enabled, including all residence halls. The IT Helpdesk (<http://www.olemiss.edu/helpdesk>) is available by phone (662-915-5222), email ([helpdesk@olemiss.edu](mailto:helpdesk@olemiss.edu)), and walk-in (Galtney Center in Weir Hall) to assist students, faculty, and staff with technology issues. Various schools and departments on campus provide additional computing facilities.

An APPROPRIATE USE POLICY (<http://www.olemiss.edu/aup>), which reflects academic honesty, ethical behavior, and consideration in the consumption of shared resources, governs the use of all campus computer facilities.

## **UNIVERSITY COMMUNICATIONS**

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**University Communications** • Tom Eppes, chief communications officer, [teppes@olemiss.edu](mailto:teppes@olemiss.edu); Tony Seaman, director, [aseaman@olemiss.edu](mailto:aseaman@olemiss.edu) • Sam/Gerard • 662-915-7066

University Communications communicates the university's strategic vision to both internal and external constituents in order to build long-term equity for the institution.

**Creative Services/Printing Services** • Hilarie Bain, associate director • Sam/Gerard • 662-915-7066 • [hpryor@olemiss.edu](mailto:hpryor@olemiss.edu)

Creative Services provides editorial and graphic design services for marketing materials, including magazines, brochures, newsletters, ads, exhibits, websites and social media.

Printing Services provides full-service four-color offset printing; full-color digital printing; variable data printing, personalized one-to-one marketing campaigns, addressing, and mailing for first-class, standard, and nonprofit letters, cards, and flats; scanning, copying, typesetting, and full bindery services for the university, the personal needs of members of the university community, and the general public.

**Media and Public Relations** • Danny Blanton, director • Sam/Gerard • 662-915- 5639 • [dblanton@olemiss.edu](mailto:dblanton@olemiss.edu)

Media and Public Relations provides news and public relations services to illuminate the achievements of our students, faculty and staff through print, broadcast, electronic, and other media.

**Photography Services** • Robert Jordan, director • 221 Gerard Hall • 662-915-7260 • [rjordan@olemiss.edu](mailto:rjordan@olemiss.edu)

Photography Services provides studio and location photography for the university community.

## **COMMUNITY SERVICES**

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**Willie Price University Nursery School** • 107 Kinard • 662-915-7444

**Outreach and Continuing Education** • E.F. Yerby Conference Center • 662-915-7283 • [outreach@olemiss.edu](mailto:outreach@olemiss.edu) • [www.outreach.olemiss.edu](http://www.outreach.olemiss.edu)

**Mississippi Small Business Development Centers** • Doug Gurley, state director • B-19 Jeanette Phillips Drive • 662-915-5001 • [msbdc@olemiss.edu](mailto:msbdc@olemiss.edu) • <http://mssbdc.org>

**Mississippi Teacher Corps** • Dr. Andrew P. Mullins, Jr., and Dr. Ryan Niemeyer, co-directors • Ben Guest, program manager • School of Education, Room 226, University, MS 38677 • 662-915-5224 • [mtc@olemiss.edu](mailto:mtc@olemiss.edu)

**Psychological Services Center** • Dr. Scott Gustafson, director • G-382 Kinard Hall • 662-915-7385

**Speech and Hearing Center** • Brad Crowe, clinic director • George Hall • 662-915-7271

**University of Mississippi Writing Project** • Ellen Shelton, director • 662-915-7925 • fax: 662-915-5137 • email: [eshelton@olemiss.edu](mailto:eshelton@olemiss.edu)

## Fees and Expenses

It is the intent of the university to keep at a minimum the necessary expenses of its students. Increases are put into effect only when public funds are inadequate and no other recourse is available. Therefore, the university reserves the right to increase or modify fees, tuition, or scholarships without prior notice, upon approval by the Board of Trustees. A portion of student tuition and fee charges is used for operating costs, including scholarships and tuition waivers.

### GRADUATE CREDIT COSTS PER SEMESTER

Tuition and required fees are assessed by credit hour, and are listed for all graduate students of The University of Mississippi on the Oxford campus for one semester of the academic year. Amounts are given for both residents and nonresidents of Mississippi; definitions of resident and nonresident students may be found in the Residence section of the "Entering the Graduate School" chapter. Please contact the Office of the Bursar at 800-891-4596 for further information.

Credit Hours	Resident Total	Nonresident Total
1	349.00	903.50
2	698.00	1,807.00
3	1,047.00	2,710.50
4	1,396.00	3,614.00
5	1,745.00	4,517.50
6	2,094.00	5,421.00
7	2,443.00	6,324.50
8	2,792.00	7,228.00
9-13	3,141.00	8,131.50
14	3,490.00	8,480.50
15	3,839.00	8,829.50

### SUMMER SESSION TUITION (per semester hour)

#### Graduate Credit-Hour Costs

Tuition (including required fees, per semester hour)	349.00
Nonresident fees (per semester hour)	349.00

### SPECIAL FEES AND EXPENSES\*

#### ON-CAMPUS HOUSING

Application fee (nonrefundable)	75.00
RESIDENCE HALL	Per academic year total
Double room (typical)	4,150.00
Single room (typical)	5,600.00
CAMPUS WALK APARTMENTS (all apartments include four bedrooms with private bathrooms and one kitchen, living room and laundry room)*	
Single room with private bathroom	4,815.00

\*The Campus Walk lease is for 12 months, which consists

of three semesters: fall, spring and summer.

<b>NORTHGATE APARTMENTS</b>	Per academic year total
One-bedroom single	6,050.00
Two-bedroom	5,730.00 each person
Three-bedroom single	5,210.00 each person

**THE VILLAGE APARTMENTS\***

Efficiency unfurnished	6,000.00
Efficiency unfurnished (renovated)	6,435.00
One-bedroom unfurnished	6,750.00
One-bedroom unfurnished (renovated)	7,005.00
Two-bedroom unfurnished (unrenovated)	2,410.00
Two-bedroom unfurnished	7,470.00
Two-bedroom unfurnished (renovated)	7,905.00
Apartment application fee (nonrefundable)	75.00

\*The Village Apartments lease is for 12 months, which consists of three semesters: fall, spring and summer.

APPLICATION FEE ..... 40.00

**COURSE CHANGE FEE**

For each add and each drop made after the last day to register ..... 10.00

SPECIAL CLASS FEE charged on certain courses up to ..... 50.00 per hour or \$5.00 to \$310.00 per course.

**REGISTRATION FEE**

The university's registration process consists of three phases. You may register for courses during any of the phases; however, a nonrefundable registration fee of \$100.00 for Phase 3 registration will be assessed. As an incentive for students who register early, the university will waive the registration fee for students who register during Phase 1 and 2. The fee is also waived if you are a newly admitted student registering at Ole Miss for the first time. The dates for Phase 1, 2, and 3 registration periods are published in the Academic Calendar for each semester.

**CANCELLATION FEE** .. the lesser of \$100 or 5 percent of total assessment. Assessed when a student cancels enrollment after classes officially begin. This fee is also applicable to students who withdraw during the 100 percent refund period. There is no fee if a student officially withdraws prior to the first day of classes.

**INTERNATIONAL STUDENT SERVICE FEE**

Fall or spring semester	..... 100.00
Summer term	..... 30.00 per term

**INTERNATIONAL STUDENT INSURANCE FEE**

Fall semester	..... 632.00 (subject to change)
Spring semester (includes summer terms)	..... 875.00 (subject to change)

AUDIT FEE (Same as credit hour fee)

RETURNED CHECK FEE ..... 20.00

ID CARD REPLACEMENT FEE ..... 30.00

PARKING DECAL FEE ..... 85.00

\*Special fees and expenses are subject to change. Contact the Graduate School for further information.

## **PAYMENT OF FEES**

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The billing and due dates for tuition and fees (housing, meal plan, special course fees, international student fees/insurance, and registration fees) occur on the following dates (or the last working day of the month if the billing date falls on a weekend or the previous working day if the due date falls on a weekend or holiday):

<b>Enrollment Period</b>	<b>Billing Date</b>	<b>Due Date</b>
Fall Semester	July 31	August 15
Wintersession, Spring Semester	November 30	December 15
Intersession, Full Summer, and First Summer	April 30	May 15
Second Summer	May 31	June 15
August Intersession	May 31	July 15

If payment is not received by the due date, a monthly 1.5 percent service fee will be assessed on the unpaid balance of tuition and fees. Payments may be made during the enrollment period; however, to avoid holds on future registration periods, tuition and fees must be paid in full, and other charges must be paid by the due date.

The begin date for the calculation of the 1.5 percent service fee is the due date regardless of the date that a student obtains a schedule. For example, if a student registers for the fall semester on August 25, and payment is not made by August 15, the student account is subject to a 1.5 percent service fee on the unpaid tuition and fees.

## **DELINQUENT ACCOUNTS**

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Regular student account balances and student loan balances are collected by the Office of the Bursar, and, if not paid, constitute a delinquent account. The university reserves the right to withhold re-admission and/or registration for future terms to a student until all delinquent amounts owed to the university have been paid. Diplomas and course transcripts are not issued for students whose accounts are delinquent. Delinquent accounts may be referred to a collection agency, in which case the account will be assessed all costs of collection, including reasonable attorney fees, whether or not a lawsuit is commenced as part of the collection process.

## **REFUND POLICIES**

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Refund policies can be found in either the Undergraduate Catalog or the Policies Directory (Policy ADM.BF.300.001).

## **HOUSING**

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Single graduate students may live in any on-campus housing facilities. However, priority is given to freshmen in traditional residence halls and student families in the Village apartments. Availability of single rooms varies. Residence halls close over Thanksgiving, winter and spring breaks. Summer school and break housing is available for students staying on campus.



## **STUDENT HEALTH SERVICE**

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The Student Health Service is a general practice medical clinic providing acute care to students. Routine clinic services are provided from 8 a.m. to 5 p.m. Monday through Thursday and 9 a.m. to 5 p.m. on Friday. Tuition covers the cost of seeing a health care professional; however, there is a fee for prescription and nonprescription drugs, laboratory tests, X-ray procedures, and supplies. **Physical therapy services** are also available on campus and are accessed by referral from Student Health or an outside health care provider. The student is responsible for all charges that result from physical therapy. The charges are placed on the student's bursar account when services are rendered. One insurance claim will be filed at the request of the student for any charges that are incurred either from health care providers at Student Health or from physical therapy.

A **pharmacy** is located in the lobby of the Student Health Center where prescriptions can be filled. Students can also take their prescriptions to the pharmacy of their choice. If the student has drug insurance coverage, then the pharmacy will file the insurance claim forms, and the student will be responsible for the copay. This charge can be billed to the student's bursar account, charged to a credit card, or paid with cash.

Because the Student Health Service is an acute care general practice medical clinic, some patients must be referred to medical specialists. Illness or injuries requiring hospitalization also are referred to the local hospital. The cost of this care must be borne by the student unless the illness or injury is covered by medical insurance. An optional medical and hospital insurance plan is available to students and students' families. Information regarding this insurance can be obtained from the Graduate School Office.

All students born after Jan. 1, 1957, must show proof of two measles and one rubella **immunizations** prior to registration. Information and required forms can be found on the Student Health website [http://www.olemiss.edu/depts/stu\\_health/](http://www.olemiss.edu/depts/stu_health/). Information regarding student insurance can also be found on the Student Health website.

## **ASSISTANTSHIPS, AWARDS, AND FELLOWSHIPS**

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The Graduate School administers Honors Fellowships, Dissertation Fellowships, Diversity Fellowships, and the Summer Graduate Research Assistantships, which are described below. Information about other fellowships is available on the Graduate School website

[http://www.olemiss.edu/depts/graduate\\_school/](http://www.olemiss.edu/depts/graduate_school/). Students may obtain information about discipline-specific assistantships and fellowships by consulting the appropriate academic department chair.

**Graduate Assistants' Health Insurance Program** • Graduate students who receive 1/4 time or above graduate assistantships are required to have health insurance that meets minimum specifications established by the Graduate School. Unless students who have graduate assistantships opt to waive participation, they are automatically entered into a university negotiated health insurance plan. The university partially subsidizes the premium for this health insurance plan. For more information, see the Graduate School's website.

**Tuition Scholarships and Nonresident Fee Scholarships** • Graduate students who receive a minimum of \$1,800 per semester as either an assistantship or fellowship are eligible for a partial tuition scholarship (75 percent of tuition for the minimum, 1/4 time stipend, increasing to a 100 percent tuition scholarship for a 1/2 time stipend). The academic requirements for holding these scholarships are given in the Academic Regulations chapter.

**Dissertation Fellowship Program** • This nonservice award is designed to assist doctoral students who are in the final stages of the dissertation process. The intent is to provide financial assistance to relieve candidates of current service-type responsibilities (teaching, research, and/or other related obligations to the

university), thereby enabling them to focus on their research analysis and writing. The amount of the award is \$6,000 plus a tuition scholarship. The time period is one semester. Full-time enrollment is required. Any student nominated must be in candidacy and must have a copy of his or her prospectus on file at the Graduate School. To be considered for this fellowship, a student must be nominated by his or her department.

**Honors Fellowship Program** • The Graduate School awards nonservice fellowships to incoming students of exceptional academic accomplishment. Recipients of a graduate fellowship are also eligible to receive departmental assistantships and/or other fellowships. To be considered for this fellowship, a student must be nominated by his or her department.

**Summer Graduate Research Assistantship Program** • The Summer Graduate Research Assistantship Program provides \$3,000 for doctoral students and \$2,500 for master's students during the summer (minimum of 10 weeks of research). The goal is to provide funds to enable promising graduate students to remain on task and on campus in their pursuit of a degree. To be considered for this program, a student must be nominated by his or her department.

**Diversity Fellowship Program** • The Graduate School administers a fellowship program designed to recruit and support qualified U.S. citizens with diverse ethnic, racial, and educational backgrounds and experiences, who will enhance the diversity of specific academic programs, and/or who demonstrate a commitment to serving underprivileged populations. The stipend associated with this fellowship is \$1,000 for master's students and \$1,500 for doctoral students per semester (fall and spring) and includes a 75 percent tuition scholarship and a 44 percent nonresident fee scholarship. To be considered for the fellowship, a student must be admitted into a degree program, must be enrolled on the Oxford campus for at least nine hours of graduate work each semester, must be nominated by his or her academic department, and must not be a full-time employee. A partial tuition scholarship and partial nonresident scholarship are also available to students who demonstrate the above qualities but who are part-time and who are enrolled at one of the off-campus centers.

## **Graduate Programs**

Candidates for higher degrees are accepted by the Graduate School in the following fields:

### **Master of Arts**

Anthropology  
Curriculum and Instruction  
Economics  
English  
Higher Education-Student Personnel  
History  
Journalism  
Mathematics  
Modern Languages  
    French  
    German  
    Spanish  
    Teaching English as a Second Language  
Parks and Recreation Management  
Philosophy  
Physics  
Political Science  
Psychology  
    Clinical  
    Experimental  
Sociology  
Southern Studies

### **Master of Science**

Biological Science  
Chemistry  
Communication Sciences and Disorders  
Engineering Science  
    Aeroacoustics  
    Chemical Engineering  
    Civil Engineering  
    Computational Hydroscience  
    Computer Science

- Electrical Engineering
- Electromagnetics
- Environmental Engineering
- Geological Engineering
- Geology
- Hydrology
- Materials Science
- Mechanical Engineering
- Telecommunications
- Exercise Science
  - Exercise Physiology
  - Neuromechanics
- Food and Nutrition Services
- Health Promotion
- Mathematics
- Pharmaceutical Science
  - Environmental Toxicology
  - Medicinal Chemistry
  - Pharmaceutics
  - Pharmacognosy
  - Pharmacology
  - Pharmacy Administration

**Master of Education**

- Counselor Education
- Curriculum and Instruction
  - Elementary Education
  - English Education
  - Literacy Education
  - Mathematics Education
  - Science Education
  - Social Studies Education
  - Special Education
- Educational Leadership, K-12

**Designated Master's Degree Programs**

- Accountancy
- Business Administration

Criminal Justice

    Criminal Justice

    Homeland Security

Fine Arts-Art

Fine Arts-Creative Writing

Health Care Administration

Music

    Choral Conducting

    Music Education

    Music Performance

Social Work

Taxation

**Specialist Degree Programs**

Counselor Education

Curriculum and Instruction

    Elementary Education

    English Education

    Mathematics Education

    Science Education

    Social Science Education

    Special Education

Educational Leadership, K-12

**Doctor of Arts**

Chemistry

**Doctor of Education**

Education (emphasis in Elementary Education)

**Doctor of Philosophy**

Accountancy

Biological Science

Business Administration

    Finance

    Management

    Management and Information Systems

    Marketing

Production Operations Management

Chemistry

Counselor Education

Economics

Education

- Educational Leadership K-12
- Secondary Education

English

Health and Kinesiology

- Exercise Science
- Health Behavior and Promotion

Higher Education

History

Mathematics

Music

- Music Education

Engineering Science

- Aeroacoustics
- Chemical Engineering
- Civil Engineering
- Computational Hydroscience
- Computer Science
- Electrical Engineering
- Electromagnetics
- Geological Engineering
- Geology
- Hydrology
- Materials Science
- Mechanical Engineering
- Telecommunications

Pharmaceutical Science

- Environmental Toxicology
- Medicinal Chemistry
- Pharmaceutics
- Pharmacognosy
- Pharmacology
- Pharmacy Administration

Physics

Political Science  
Psychology  
    Clinical  
    Experimental

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### **GRADUATE PROGRAMS IN THE MEDICAL SCIENCES**

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The degrees of Master of Science and Doctor of Philosophy in the various basic medical sciences are offered by the Graduate School of The University of Mississippi at the University Medical Center in Jackson. Inquiries concerning the graduate program should be addressed to the Division of Student Services and Records, The University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216, (601) 984-1080.

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### **OPERATIONAL PROCEDURES**

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The policies and regulations of the Fall 2012 Graduate School Catalog take effect with the registration procedures for the fall 2012 session. Graduate students whose notices of admission have been issued prior to the fall session registration of 2011 must conform to any changes in regulations made prior to the beginning of spring session registration. A graduate student making application for degree must meet the requirements of the catalog under which he or she was admitted or re-admitted. When a graduate student completes a degree program and seeks another degree, the student must satisfy the requirements stated in the catalog in effect during the enrollment period for the new degree. In the event that any regulation of the Graduate School conflicts with the regulation of a department or school, the Graduate School regulation must be met; the preceding statement, however, does not preclude the right of a department or school to impose additional requirements that exceed those of the Graduate School.

Graduate students are expected to familiarize themselves with the academic requirements and regulations stated in this catalog. Ignorance of these requirements and regulations, incorrect statements or advice from faculty or students, or misunderstandings of these procedures will not be accepted as cause for waiving any requirement or regulation in this catalog.

Graduate students who, because of exceptional or extraordinary circumstances, wish to be granted exceptions from the regulations of this catalog may petition in writing to the dean of the Graduate School. Such petitions must bear the recommendation of the department chair or dean concerned. The dean of the Graduate School may act upon the petition, or he or she may refer it for the recommendation of the Graduate Council. The recommendation of the Graduate Council will be considered final when approved by the dean of the Graduate School and the chancellor of the university.

## Admissions Policies and Procedures

### APPLICATION PROCEDURE

In order to be assured of consideration for admission, the following materials must be on file in the Graduate School prior to April 1 for summer and fall enrollment and prior to October 1 for spring enrollment: an application for Graduate School must include an application form, official transcripts from all institutions attended, and appropriate test scores (GRE/GMAT/TOEFL/etc.). Graduate programs may establish different application deadlines. Applicants are urged to contact the department for which they are making application regarding departmental requirements and deadlines.

Applications for admission to the Graduate School must be completed by the deadlines noted above. Incomplete applications will be held for one year. Beyond that time, the application process, including submission of a new application fee, must begin again. An application is complete when the following materials have been received:

1. A completed paper or online application form. Applicants must note on their applications whether they are electing full-time or part-time status.
2. An official score from a standardized test: GMAT for programs in the School of Accountancy, GMAT or GRE for the School of Business Administration, and GRE (verbal and quantitative sections) for most other programs. TOEFL, IELTS, or PTE is required of all applicants (foreign and U.S. citizens) whose native language is not English. Submission of a TOEFL, IELTS, or PTE score is required at the time of application. Other materials may be required by specific departments.
3. Official transcripts from the institution conferring the baccalaureate degree and from all colleges and universities subsequently attended. Only transcripts mailed directly from the sending institution to the Graduate School are considered official.
4. Proof of immunization (see immunization requirements in this catalog).

All application materials should be sent to the Graduate School. Applicants failing to provide any of the materials noted above will not be considered for admission. The Graduate School may request additional information from an applicant to confirm his or her citizenship, state residency, and whether the applicant's native language is English.

Departments may require additional application materials. Applicants are advised to contact the appropriate department about additional requirements.

**Admission** • Admission to the Graduate School is determined by the dean of the Graduate School after evaluation and approval of credentials and recommendation by the faculty of the academic discipline concerned. The Graduate School at The University of Mississippi recognizes the necessity of using multiple criteria in making admission decisions. These criteria include an applicant's previous academic performance and scores on standardized tests and may include research and practical experiences, evidence of skill (e.g., a writing sample), letters of recommendation, and, in the case of applicants whose native language is not English, scores on an English proficiency exam (TOEFL, IELTS, or PTE). Students may apply for admission before a baccalaureate degree is completed but may not enroll as a graduate student until the degree is conferred. Meeting minimum standards does not guarantee admission to a degree program. The selection process is competitive, and admission decisions take into consideration the availability of space and resources within a department. To assure full consideration for admission, all application materials must be received by deadline dates.

**Re-admission** • University of Mississippi students who have a break in enrollment of one or more semesters must apply for re-admission. Official transcripts must be requested by the student, and received by the Graduate School, from all institutions attended since the last University of Mississippi enrollment.



Students are admitted for a particular semester. If they are unable to enroll in courses that semester, they may request that their application be updated for the next semester. Re-admitted students will be subject to departmental, university, and catalog regulations in effect at the time of their re-admission.

#### **CATEGORIES OF ADMISSION: DEGREE SEEKING**

1. **Full Standing Admission** • Upon recommendation by the faculty of the academic area concerned, a student who holds a baccalaureate degree from a regionally accredited institution, has a 3.0 or equivalent average on the last 60 hours of undergraduate course work, and has an acceptable score on the standardized test appropriate to their discipline, may be considered for admission in full standing to a degree program. Enrollment in 700-level courses and thesis is restricted to students who have been admitted to degree programs in full standing.
2. **Conditional Admission** • Applicants who have not met requirements for full standing admission but whose credentials include a baccalaureate degree and appropriate standardized test scores and who indicate a reasonable chance for success, may be admitted in this category. Upon advancement to full standing admission and recommendation of the departmental chair concerned, credit earned while enrolled in this status may be applied to a degree program. Students admitted in this category are restricted to enrollment in courses at the 600 level and below, exclusive of thesis, and must satisfy all conditions of admission by the end of their first term of enrollment, or their status will be changed to nondegree. Except in unusual circumstances, students may not remain in conditional status more than one semester. Conditional students may not preregister for a second enrollment.
3. **Qualifying for Admission** • Applicants whose academic qualifications are not sufficiently strong to warrant admission to a degree program, but who take courses that will strengthen their qualifications to enter graduate degree programs, will be admitted as qualifying students. Courses completed in this category may not be applied to a graduate degree program at The University of Mississippi. Students admitted in this category are not eligible to receive graduate assistantships. While in qualifying status, a student may take a minimum of 9 hours and a maximum of 18 hours. When recommending admission into this category, departments are required to specify up to 18 hours of undergraduate course work, and/or to specify a noncourse requirement, to be completed satisfactorily before the student is considered for admission into a graduate degree program.
4. **Temporary Admission** • Applicants whose credentials are received within the deadline for application but too late for the admission process to be completed prior to registration will be admitted as temporary students. Enrollment is restricted to courses at the 500 level and below.

#### **CATEGORIES OF ADMISSION: NONDEGREE SEEKING**

1. **Nondegree I** • Applicants with no intention to pursue or qualify for a graduate degree program and whose undergraduate grade-point average is below 2.7 will be admitted in this category. Enrollment is restricted to courses at the 400 level and below.
2. **Nondegree II** • Applicants with no intention to pursue a graduate degree program and whose undergraduate grade-point average is 2.7 or higher will be admitted in this category. Nondegree II students who later apply for and are accepted in a degree program may apply a maximum of 9 hours of graduate work taken in this category. Enrollment is restricted to courses at the 600 level and below.
3. **Visiting** • A student who wishes to enroll in graduate course work for transfer toward a degree at another institution may be admitted in a visiting status. A visiting student must have written approval of the institution to which the credit will be transferred. Credit earned as a visiting student at The University of Mississippi may not be applied toward a degree program at this institution.

## **RESIDENCE**

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**Legal Residence of Students** • The university applies the definitions and conditions stated here as required by state law in the classification of students as residents or nonresidents for the assessment of fees. Requests for a review of residency classification should be submitted to the registrar; forms for this purpose are available from the Registrar's Office. Such requests, when involving a specific enrollment period, are reviewed until classes begin for that particular enrollment period as stated in the Academic Calendar, provided the Request for Review Forms are received by the registrar before the beginning of classes.

**A MINOR.** The residency of a minor (less than 21 years of age) is that of the father, the mother, or a general guardian duly appointed by a proper court in Mississippi. If a court has granted custody of the minor to one parent, the residence of the minor is that of the parent who was granted custody by the court. If both parents are dead, the residence of the minor is that of the last surviving parent at the time of that parent's death, unless the minor lives with a general guardian, duly appointed by a proper court of Mississippi, in which case his residence becomes that of the guardian. A student who, upon registration at a Mississippi institution of higher learning or community college, presents a transcript demonstrating graduation from a Mississippi secondary school and who has been a secondary school student in Mississippi for not less than the final four (4) years of secondary school attendance shall not be required to pay out-of-state tuition. This section shall not apply to a person as it relates to residency for voter registration or voting.

**REMOVAL OF PARENTS FROM MISSISSIPPI.** If the parents of a minor who is enrolled as a student in an institution of higher learning move their legal residence from the state of Mississippi, the minor is immediately classified as a nonresident student.

**TWELVE MONTHS OF RESIDENCE REQUIRED.** No student may be admitted to the university as a resident of Mississippi unless his residence, as defined above, has been in the state of Mississippi for a continuous period of at least 12 months immediately preceding his admission.

**RESIDENCE IN AN EDUCATIONAL INSTITUTION CAN BE COUNTED.** A student who has lived within the state for 12 months following his 21st birthday may establish residence in his own right by showing that he is living in the state with the intention of abandoning his former domicile and remaining in the state of Mississippi permanently, or for an indefinite length of time.

**RESIDENCE STATUS OF A MARRIED STUDENT.** A married student may claim the residence of the spouse, or may claim independent residence status under the same regulations, set forth above, as any other adult.

**MILITARY PERSONNEL ASSIGNED ON ACTIVE DUTY STATION IN MISSISSIPPI.** Members of the armed forces on extended active duty and stationed within the state of Mississippi, except those military personnel whose active duty assignment is for educational purposes, may be classified as residents, without regard to the residence requirement of 12 months, for the purpose of attendance at the university. Resident status of such military personnel who are not legal residents of Mississippi, as defined above under "Legal Residence of an Adult," shall terminate upon their re-assignment for duty in the continental United States outside Mississippi.

**CHILDREN OF MILITARY PERSONNEL.** Resident status of children of members of the armed forces on extended active duty shall be that of the military parent for the purpose of attending the university during the time that their military parents are stationed within the state of Mississippi and shall be continued through the time that military parents are stationed in an overseas area with last duty assignment within the state of Mississippi, excepting temporary training assignments en route from Mississippi. Resident status of minor children shall terminate upon reassignment under permanent change of station orders of their military parents for duty in the continental United States outside Mississippi, excepting temporary training assignments en route from Mississippi.

**CERTIFICATION OF RESIDENCE OF MILITARY PERSONNEL.** A military person on active duty station in Mississippi who wishes to avail himself or his dependents of the provisions of the paragraph titled "Military Personnel Assigned on Active Duty Station in Mississippi" must submit a certificate from the military organization showing the name of the military member, the name of the dependent, if for a dependent, the name of the organization of assignment and its address (may be in the letterhead), that the military member will be on active duty stationed in Mississippi on the date of registration at the university; that the military member is not on transfer orders; and the signature of the commanding officer, the adjutant, or the personnel officer of the unit of assignment with signer's rank and title. A military certificate must be presented to the registrar of the university each semester at (or within 10 days prior to) registration for the provisions of the paragraph "Military Personnel Assigned on Active Duty Station in Mississippi," named above, to be effective.

**Families of Students** • The spouse and children of a nonresident student who pays or receives a waiver of the nonresident fee may enroll in the university upon payment of the appropriate fees charged to a resident. Nonresident fees for spouses and children of part-time nonresident students will be prorated.

**Responsibility of Students** • Residency classification of an applicant for admission is determined by the registrar and is stated on the Admission Certificate issued. Students should notify the registrar immediately by letter of any change in residence.

## **INTERNATIONAL APPLICATIONS**

**English Language Proficiency** • To be considered for admission, international students must present evidence of satisfactory proficiency in the English language as indicated by results of the Test of English as a Foreign Language (TOEFL), the results of the International English Language Testing System (IELTS) examination, or the results of the Pearson Test of English-Academic (PTE-A). The applicant must request that the testing center send the official results to the Graduate School at the University. TOEFL, IELTS, or PTE-A is required of all applicants whose native language is not English. The Graduate School recognizes a number of countries as being English-speaking, and applicants who are citizens of these countries will be exempted from the English proficiency requirement for an application. In addition, evidence that English is an applicant's "native language" can be determined by the medium of academic study, which is defined as the equivalent of four years of instruction at the secondary or college level where the language of instruction is English. Applicants who have earned a bachelor's or master's degree from an institution of higher learning where the medium of instruction is English may be considered for a waiver of the requirement for English language proficiency testing.

- Applicants who submit scores of at least 79 on the TOEFL (ibt), 550 on the TOEFL (pbt), 6 on the IELTS or 53 on the PTE-A may be considered for full standing admission (some graduate programs may require higher scores for consideration for admission).
- Applicants who submit scores between 69-78 on the TOEFL (ibt), 523-549 on the TOEFL (pbt), 5.5-5.99 on the IELTS, 47-52 on the PTE-A, or less than 70 on the Michigan English Proficiency Tests are required to take and successfully complete IE 100 (English for Specific Purposes) during the first semester of enrollment. IE 100 must be repeated until satisfactory results are obtained.
- Applicants who submit scores below 69 on the TOEFL (ibt), 523 on the TOEFL (pbt), 5.5 on the IELTS, or 47 on the PTE-A can only be admitted to The University of Mississippi Intensive English Program.
- Students who satisfactorily complete IE 100 must present a score on the institutional TOEFL that is equivalent to the above target score.

Applicants for graduate teaching assistantships whose native language is not English must present acceptable results on the Test of Spoken English (TSE) given at overseas TOEFL centers or The University of Mississippi institutional test of spoken English (SPEAK).

International students with scholar status who desire to enroll in the Graduate School but who do not wish to pursue a degree may be admitted without the required English language proficiency test score. These students will be limited to enrollment as auditing students only. Should a student admitted under this provision later wish to be admitted to a degree program, all admission requirements, including acceptable TOEFL or IELTS scores or the equivalent, must be met. However, no course work taken while an auditing student will be applied in any way to the degree program.

## **REGISTRATION PROCEDURE**

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**Instructions** • New graduate students should obtain registration instructions from their graduate advisers prior to or at the beginning of their first period of enrollment. Continuing or re-admitted students are encouraged to take advantage of the priority registration periods. A student must be admitted to the Graduate School and must register in order to receive graduate credit.

**Fees** • Registration is incomplete until final clearance is obtained through fee payment at the Office of the Bursar.

**Admission** • A student should note that admission to the Graduate School does not constitute admission to a degree program unless it is specifically stated on the student's notice of admission.

## Academic Regulations

**Grades** • Students may receive quality grades of A, A-, B+, B, B-, C+, C, C-, D, or F on graduate course work, but grades of D and F are not acceptable for graduate credit. In calculating grade-point average, the quality points associated with the above scale are as follows: A = 4.0, A- = 3.7, B+ = 3.3, B = 3.0, B- = 2.7, C+ = 2.3, C = 2.0, C- = 1.7, D = 1.0 and F = 0. In certain specifically designated courses, the mark of Z is given to indicate that a student has received graduate credit but has been assigned no quality grade in the course; however, in courses approved for the Z mark, instructors may assign the quality grade of F. The only other marks that may be assigned in courses approved for the Z mark are I or W.

Graduate students must maintain at least a B = 3.0 average on all graduate work undertaken. Where a student is required to take, as part of the degree program, more than 12 hours in an area outside the field of specialization, a B = 3.0 average must be presented in both areas, computed separately. Unless specifically approved to be otherwise, no grades or marks are given for courses designated as thesis, doctoral essay, or dissertation. In any situation in which a graduate student wishes to appeal a grade, he or she should contact the dean of the Graduate School for a copy of the Graduate School Appeal Procedure, which shall apply in this case.

**Good Standing and Probation** • To be in good standing, graduate students are expected to maintain a B average. Students must have a 3.0 GPA on course work that is presented to satisfy requirements for a degree. Students whose grade-point average falls below 3.0 in any regular semester will be placed on probation and expected to improve their grades to an acceptable level before the end of their next period of enrollment. If the grade-point average of a graduate student for a semester or term has been unsatisfactory, the dean of the Graduate School may refuse permission for the student to register for further work or change the student's classification.

**Repeating Courses** • Grades for all courses taken by graduate students will remain a permanent part of their transcript. (That is, the forgiveness policy does not apply to graduate students.) Except for courses identified in the catalog as "may be repeated for credit," no course may be repeated more than once, and no more than two courses may be repeated and applied toward a degree. In instances of repeated courses, the grade and credit hours for the second attempt will be used to determine eligibility to graduate. Departments may impose higher standards. For those courses that may be repeated for credit, the department offering the course would notify the registrar's office to rename (or index as I/II, etc.) the course on students' transcripts at each offering.

**Discipline** • The broad purpose underlying student discipline is to order university living in such a way that the interests of the student body as a whole and of the individuals comprising it are best served. The university reserves the right to sever the connection of any student with the university for appropriate reason. In any situation in which a graduate student wishes to appeal a charge of academic dishonesty, he or she should contact the dean of the Graduate School for a copy of the Graduate School Appeal Procedure, which shall apply in this case.

**Minimum/Maximum Enrollment and Definition of Full-Time** • A minimum enrollment of 3 hours is required of every graduate student in each regular semester and 1 hour during the summer session, including registration for thesis or dissertation. The maximum enrollment for a graduate student during a regular session is 15 semester hours, including thesis and dissertation. In the summer session, the student may register for no more than 6 semester hours each term. Additional restrictions may be imposed by academic departments.

A graduate student registered for 9 or more graduate-level credit hours during the fall or spring semesters at the university is considered to be a full-time student. In a summer term, a graduate student registered for 4 or more semester hours is considered a full-time student though, to satisfy residence requirements, the student must enroll for a total of 9 hours during the summer session terms.

Students receiving a full university Nonservice Fellowship must enroll for at least 9 hours per semester. Enrollments for students holding service appointments are governed by the following schedule:

Service requirement	Minimum enrollment	Maximum enrollment
3/4 time (30 hours/week)	9 hours*	9 hours
1/2 time (20 hours/week)	9 hours	12 hours**
1/4 time (10 hours/week)	6 hours	12 hours
Less than 1/4 time	3 hours	15 hours

\*Only 6 hours of which can be in course work, the balance being made up of enrollment in thesis, dissertation, or recital hours.

\*\*Only 9 hours of which can be in course work, the balance being made up of enrollment in thesis, dissertation, or recital hours.

In order to be eligible to receive a partial tuition scholarship, graduate assistants must enroll for at least 9 hours of graduate credit.

**Withdrawal from a Course** • Registration for a course makes the student responsible for attending that course until the course is completed or until, with the approval of the instructor and the dean of the Graduate School, the registrar authorizes withdrawal from the course. The last day that a student may withdraw from a class without a record of enrollment in each semester is listed in the Academic Calendar.

**Graduate Credit for Senior Undergraduates** • Under certain conditions, University of Mississippi seniors within 15 semester hours of the bachelor's degree may enroll for a maximum of 3 semester hours of graduate courses at the 500 level, and seniors within 12 semester hours of the bachelor's degree may enroll for a maximum of 6 semester hours of graduate courses at the 500 level on which graduate credit will be given towards a degree program in the Graduate School. The conditions are that the student must have an overall grade-point average of at least 3.00 on the last 60 hours of undergraduate work and be otherwise qualified for admission to the Graduate School, that these courses must not be counted towards satisfying the requirements for the bachelor's degree, and that the department chair concerned and the dean of the Graduate School must have approved the courses for graduate credit before the undergraduate enrolls in them. Whereas the general rule is that a maximum of 6 semester hours can be earned by an undergraduate for graduate credit, this maximum can be extended for specifically approved programs that are designed to accelerate a student's entry into a University of Mississippi graduate or first professional program. Courses taken by undergraduates for graduate credit must be designated with the suffix G. Under no circumstances may undergraduates enroll in courses at the 600 level or above.

**Transfer of Graduate Credit from Another Institution** • A student may receive credit for work accomplished in recognized institutions upon the recommendation of the department and the approval of the dean of the Graduate School. Only courses for which the student received the grade of B or higher may be transferred. Transfer of credit from another institution will not be accepted for workshops, internships, and other courses of a similar nature, and for courses in which regular letter grades are not awarded. Grades from other institutions may not substitute for unsatisfactory grades earned at the university; nor may the grade of A or B earned at another institution be used to offset a lower grade earned at the university. Transfer work from another institution that constitutes an overload while enrolled as a full-time student at The University of Mississippi will not be accepted.

All transfer of credit is subject to the following conditions: (1) The residence or degree credit requirement is not reduced. (2) The other graduate school must offer a graduate degree in the field in which the work has been completed. (3) The student must have completed at least 12 semester hours of acceptable graduate course work at the university before transfer will be considered. (4) The credit must be recommended by the student's department in the university as specifically applicable to the student's degree program. (5) If the field is education, the other graduate school must be accredited for graduate study by the National Council for Accreditation of Teacher Education and by the regional accrediting association. For master's

degree students, a maximum of 6 semester hours of credit may be transferred; no more than 12 hours may be transferred for the Master of Fine Arts and Specialist degrees. The 6-hour transfer policy also applies within the university. No more than 6 hours, subject to departmental approval, may be applied from a previous master's degree to a second master's degree.

There is a six-year time limit on the applicability of transferred credit, as there is on all credits applicable towards the master's degree. No work will be accepted for transfer to a doctoral program, but departmental doctoral program requirements may be waived or reduced as a result of graduate work completed at other institutions; however, Graduate School minimum degree requirements must be met.

**Application for a Degree** • A student must submit an application for a degree during the last semester or summer term of enrollment. If the student is not able to complete degree requirements at the end of that period, the student must resubmit the application during the semester or summer term at the end of which the student expects to graduate. A student must be formally admitted to the degree program prior to the beginning of the semester in which the degree is awarded and must meet the requirements of the catalog under which he or she was admitted or readmitted.

**Final Enrollment** • All students planning to receive their graduate degrees must be enrolled for at least 3 hours (thesis, dissertation, or course work) during the fall or spring semester in which they take the final oral and/or written examination. Those planning to graduate during the summer must be enrolled for at least one hour.

## Requirements for Graduate Degrees

Degrees higher than the baccalaureate are granted at the University of Mississippi because of special attainments achieved by degree candidates. Prospective students should understand clearly that a graduate degree is not awarded upon the basis of a collection of course credits, or the passing of certain prescribed examinations, or the submission of a thesis or dissertation. In other words, the student cannot expect to receive a higher degree because of successfully completing the individual parts of the degree program. Course schedules, examinations, and other requirements explained in this catalog are to be regarded as minimal; and any student may be required to satisfy whatever additional requirements academic advisers deem appropriate.

To receive a higher degree from the University of Mississippi, the student must demonstrate to the satisfaction of the graduate faculty of the department, school, or college of the student and to the faculty of the university that the student has attained through intelligence, scholarship, industry, and personal qualities the high level of professional and academic competence that the faculty of each department expects of a person holding the degree being sought. The determination of fitness to qualify for the degree rests solely upon the estimate that the faculty makes of the student's right to the degree. (See also "Operational Procedures" section and see the School of Law and School of Pharmacy catalog entries for information about the J.D. and Pharm.D. degrees.)

### MASTER'S DEGREES

The requirements stated below are basic for all master's degrees. Additional departmental requirements may be found preceding the lists of courses offered in the various departments.

**Semester Hours** • A minimum of 30 semester hours of graduate credit is required for all master's degrees (with the exception of Master of Fine Arts degrees, as mentioned below). Specific degree programs may require more than these minima. For degree programs in which the thesis is required or included, 24 semester hours of course work are required in addition to a minimum of 6 semester hours thesis credit. Graduate students in a master's degree program must complete a minimum of 18 hours of formal classroom lecture courses; that is, courses that require regular attendance, study assignments, final examinations, and quality grades, and that are not designated or conducted as workshops, group study, directed study, directed readings, field study, practicum, internships, etc. No more than 6 hours of Z-graded courses may be applied toward the degree program, and a minimum of 24 hours must be taken in courses other than internships and practicums.

The Master of Fine Arts degree, which is offered in art and creative writing, requires a minimum of 54 semester hours in the subject area, two years of academic residency, and a thesis project of 6 semester hours. Up to 30 hours beyond the bachelor's degree may be waived by the department on the basis of previous graduate work completed in the subject field. The last 30 hours of this degree must meet the time limit requirement for completion of master's degrees.

**Final Examination** • Except for students enrolled in a program that has a comparable culminating experience and has received approval of the Graduate Council, every candidate for a master's degree must pass a final written or oral examination administered by a committee appointed by the dean of the Graduate School and recommended by the chair of the department or the program coordinator of the program to which the student was admitted. The committee must be composed of three members of the graduate faculty (associate or full) in the student's department or graduate program, with one member designated as chair. The oral examination shall cover the candidate's graduate courses, the general background of the field of study, and thesis (if the thesis is required). The oral examination may be taken only after the student has satisfied the foreign language requirement (if any) and the thesis (when required) is in final form (that is, ready for submission to the graduate dean except for corrections required by the oral examining committee at the oral examination). The dean of the Graduate School will not schedule oral examinations during the regular university examination periods at the end of enrollment periods or between semesters.



Final oral or written examinations for master's degrees should be administered no earlier than midterm of the semester in which the candidate is enrolled in the final courses, excluding thesis hours, required for the degree. A department or division may require supplementary oral or written examinations and may require additional course work of candidates whose oral examinations are unsatisfactory. However, the course work will not replace the requirement that candidates successfully complete a final oral or written examination.

**Major and Minor Fields** • As a rule, requirements at the master's level preclude the designation of a minor area. In special instances, with the approval of the major department and the dean of the Graduate School, the candidate may plan a program that includes 6 to 12 hours in one area or 6 hours in each of two areas. A concentration of less than 6 hours will not be considered a minor.

**Time Limit** • All work applying to a master's degree must be completed within a six-year time period. All students whose work has been interrupted by involuntary service in the armed forces are allowed six years in addition to the time spent in the armed services. This exception does not apply to career military personnel. Grades received for courses taken for master's degrees that do not fall within the time limit for completion of all degree requirements will not be used in determining the overall grade-point average.

**Thesis** • Except for the nonthesis option programs in communication sciences and disorders, economics, education, engineering science, history, mathematics, modern languages, philosophy, physics, sociology, and Southern studies, a thesis is required for all candidates for the degree of Master of Arts and Master of Science. In programs requiring a thesis, candidates must register for 6 semester hours of thesis. A student who has obtained 6 semester hours of thesis credit without completing the thesis, and who has completed all course work, must enroll for 3 semester hours of thesis or course work each subsequent semester in order to obtain library and parking permits, student housing, etc. For summer graduates, enrollment may be in either first, second or full summer term, but an enrollment during the intersession will not fulfill this requirement. If the degree is not awarded at the end of the semester or summer term, as anticipated, another registration for 3 semester hours is required in the semester in which the degree is granted.

Regulations governing the style, format, paper, abstract and other matters may be found in *A Manual of Theses and Dissertations* available in the Graduate School Office. After the oral examination has been accepted, the student must present to the Graduate School two unbound copies of the thesis. A copy of the abstract and the thesis binding fee receipt must accompany the copies of the thesis.

## **SPECIALIST DEGREES**

**Requirements** • Requirements for the specialist degree will be found in the "Programs and Courses of Instruction" chapter of this catalog. A specialist degree requires either a minimum of 36 hours beyond the related master's degree or a minimum of 66 hours beyond the bachelor's degree. Candidates for the specialist degree must pass a final oral examination. Specialist degrees are offered in curriculum and instruction (elementary education, secondary education, and special education), educational leadership, and counselor education.

**Time Limit** • All course work for a specialist degree program must be completed within six years. The time limit is to be computed from the date of enrollment in the first course that is counted towards fulfillment of the requirements of the degree.

## **DOCTORAL DEGREES**

**Requirements for All Doctoral Programs** • In addition to the above "General Requirements for All Advanced Degrees" and those requirements listed below, additional program requirements may be found in the description of individual graduate degree programs in the Academic Structure.

**Course and Degree Credit Requirements** • The aim of the doctoral program is to afford instruction and guidance leading to the mastery of a major field. Specific course requirements as deemed necessary are

stipulated by the student's advisory committee. In certain instances, a student may be required to take courses in a minor field. For students required to take a minor, a specific program will be formulated.

To fulfill the degree credit requirement, the student must (a) have completed three years (54 hours) of study beyond the bachelor's degree; (b) have completed a minimum of two years (36 hours) of graduate study at The University of Mississippi; and (c) have completed a minimum of one year (18 hours) of graduate work in continuous residence.

Where course work (excluding dissertation hours) is required for the degree, at least one-half, up to 30 hours, must be completed at The University of Mississippi.

Certain nontraditional graduate programs have been approved for delivery at off-campus sites, including centers at Tupelo and Jackson. Course work taken at these sites can fulfill the above requirements.

**Preliminary Examination** • At or near the beginning of the student's work beyond the master's degree, the department or school may require a preliminary examination to determine the student's qualifications to undertake a program leading to the doctorate and to assist the student's adviser in planning the student's program.

**Time Limit** • All required formal course work and the comprehensive exam should be completed within four calendar years of initial enrollment into degree seeking (conditional or full-standing) status, whether a student begins the doctoral program following completion of a bachelor's or a master's degree. After passing the comprehensive exam, a student becomes a candidate for the doctoral degree and must complete all remaining requirements, including the written dissertation and its defense, within five calendar years. If a candidate does not complete all requirements within this time, then the Graduate School will change the student's status to nondegree seeking.

The Graduate School may grant a one-year extension to this time limit for serious, nonacademic hardships (e.g., military duty, pregnancy, illness, or problems within the student's immediate family).

Additionally, a student may petition his or her academic program for a limited extension for a reason unrelated to personal hardship. If an academic program grants an extension, it may also impose additional requirements, which may include passing another comprehensive examination, more course work, and/or other appropriate remedies. Any extension plan accepted by the candidate and the academic program must be approved by the Graduate School.

**Comprehensive Examinations and Admission to Candidacy** • All doctoral students must successfully complete a comprehensive examination. Upon completion of this examination, the student is admitted to candidacy.

The purpose of this examination is to establish that the student has satisfactorily mastered the body of academic material appropriate to the degree. Though academic programs have broad latitude in the design of comprehensive examinations, the following guidelines should be followed. The examination may be either a single test or a set of tests. The examination must be written; however, departments may require that part of the examination be oral. The examination may be constructed and evaluated by the student's dissertation advisory committee or by a separate committee. To sit for the examination, a student must be in full-standing status, must have satisfied any foreign language requirement, must have a graduate grade-point average of 3.0 or above, and must not have an outstanding I grade. If a graduate program has an extra departmental concentration area of more than 12 hours, a component of the comprehensive examination must include testing over this concentration area, and this testing must be done by faculty in the second department. Upon completion of all components of a comprehensive examination and notification to the Graduate School, the student is considered to be a candidate for the degree. In general, this status signifies that the individual has completed all or nearly all of the program course work and has entered the formal dissertation (or doctoral essay) stage of the program. Ordinarily, the comprehensive examination should be completed before the dissertation prospectus is defended.

In any situation in which a student wishes to appeal the results of his or her comprehensive examination, he or she may appeal, following procedures in the Graduate Student Appeal Process.

**Continuous Enrollment** • Upon admission to candidacy, a doctoral student is expected to maintain continuous enrollment. Minimum enrollment to fulfill this requirement is 3 hours of graduate-level course work for fall, spring, or summer terms, with enrollment for at least two of these three periods being required for any 12-month period. (Note that the minimum enrollment during the summer would be 1 hour if the enrollment is not to satisfy the continuous enrollment policy.)

**Penalty Clause** • The penalty for failure to maintain continuous enrollment, following admission to candidacy, is a fee equal to the tuition charge that would be necessary to have maintained continuous enrollment for the most recent 12-month period.

**Binding and Digital Archiving** • A fee of \$88 for binding and digital storage of doctoral dissertations must be paid at the Office of the Bursar and the receipt presented to the Graduate School office. This fee covers the cost of publishing and digital archiving of the dissertation by UMI Dissertation Publishing, inclusion of the abstract in ProQuest Dissertations and Theses, and transportation charges. It is recommended, but not required, that the candidate copyright the dissertation; copyright fee is \$65.

## **DOCTOR OF PHILOSOPHY DEGREE**

**Dissertation Prospectus** • A Dissertation Prospectus Committee will be appointed by the chair of the department to which the student has been admitted. The chair of this committee must be a full member of the graduate faculty. A minimum of two additional members of the department and one member external of the discipline comprise a committee, all of whom must be members of the graduate faculty. The dissertation prospectus must be defended in oral examination and, in its final approved form, submitted to the Graduate School. The form of the dissertation prospectus will be determined by the committee. The dissertation prospectus oral defense and completion of the dissertation defense cannot occur during the same full term (fall, spring, full summer), and there must be a minimum of four calendar months between these events.

**Dissertation** • A minimum enrollment of 18 hours of dissertation credit is required of every Ph.D. student. The dissertation must conform to the regulations governing style set forth in *A Manual of Thesis and Dissertation Preparation*, available in the Graduate School. Two copies of the dissertation must be presented to the Graduate School after the final examination for the doctorate has been accepted and before the beginning of the regular examination period for the semester in which the candidate plans to graduate.

**Final Oral Examination** • Every candidate for the Ph.D. degree must successfully pass a final oral examination (defense of dissertation) administered by the student's dissertation committee and scheduled by the Graduate School. The committee shall direct the examination primarily to the defense of the dissertation, though it may include material from the student's major and/or minor fields. Departments may require in addition a written examination, but the oral examination must be conducted. The oral examination may be given only after the dissertation is in final form (that is, ready for submission to the Graduate School except for corrections required by the examining committee at the oral examination). The dean of the Graduate School will not schedule oral examinations during the regular university examination periods at the end of enrollment periods or when the university is officially closed.

## **DOCTOR OF ARTS DEGREE**

The Doctor of Arts degree programs in chemistry and music have been designed to prepare teachers who possess a comprehensive knowledge of their academic area of interest and an ability to perform effectively in the classroom. Unlike the Doctor of Philosophy degree in which the primary emphasis is placed upon research, the Doctor of Arts degree program places stress upon the breadth of the candidate's knowledge and the attainment of teaching skills.

**General Requirements** • The general requirements for the Doctor of Arts degree include the completion of the master's degree or its equivalent in the candidate's subject matter area before admission to the program, the completion of 60 hours of course work or the equivalent with a grade-point average of 3.0 or above, the writing of a doctoral essay or thesis, the passing of a comprehensive examination, and the completion of an internship supervised by members of the graduate faculty in the area of concentration.

**Doctoral Essay** • Departments giving the Doctor of Arts degree have the option of making comprehensive the final examination for the degree or of requiring the student to defend a thesis or doctoral essay in an additional final oral examination. The doctoral essay or thesis for the Doctor of Arts degree must conform to the regulations governing style set forth in *A Manual of Thesis and Dissertation Preparation*, available in the Graduate School. Two copies must be presented to the Graduate School after the final examination for the doctorate has been accepted and before the beginning of the regular examination period for the semester in which the candidate plans to graduate.

**Final Oral Examination** • Unless required by their departments, Doctor of Arts students are exempt from the requirement of a final examination. If requested to do so, the dean of the Graduate School will appoint an examining committee for a final oral examination.

## **DOCTOR OF EDUCATION DEGREE**

**Dissertation Prospectus** • A Dissertation Prospectus Committee will be appointed by the chair of the department to which the student has been admitted. The chair of this committee must be a full member of the graduate faculty. A minimum of two additional members of the department and one member external of the discipline comprise a committee, all of whom must be members of the graduate faculty. The dissertation prospectus must be defended in oral examination and, in its final approved form, submitted to the Graduate School. The form of the dissertation prospectus will be determined by the committee. The dissertation prospectus oral defense and completion of the dissertation defense cannot occur during the same full term (fall, spring, full summer), and there must be a minimum of four calendar months between these events.

**Dissertation** • A minimum enrollment of 18 hours of dissertation credit is required of every Ed.D. student. The dissertation must conform to the regulations governing style set forth in *A Manual of Thesis and Dissertation Preparation*, available in the Graduate School. Two copies of the dissertation must be presented to the Graduate School after the final examination before the doctorate has been accepted and before the beginning of the regular examination period for the semester in which the candidate plans to graduate.

**Final Oral Examination** • Every candidate for the Ed.D. degree must successfully pass a final oral examination (defense of dissertation) administered by the student's dissertation committee and scheduled by the Graduate School. The committee shall direct the examination primarily to the defense of the dissertation, though it may include material from the student's major and/or minor fields. Departments may require in addition a written examination, but the oral examination must be conducted. The oral examination may be given only after the dissertation is in final form (that is, ready for submission to the Graduate School except for corrections required by the examining committee at the oral examination). The dean of the Graduate School will not schedule oral examinations during the regular university examination periods at the end of enrollment periods or when the university is officially closed.

## **PROGRAMS AND COURSES OF INSTRUCTION**

### **College of Liberal Arts**

Glenn W. Hopkins, dean  
Janice Murray, associate dean  
Holly Reynolds, associate dean  
Stephen Monroe, assistant dean

Ventress Hall • 662-915-7177  
<http://www.olemiss.edu/libarts/>

### **ART**

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Associate Professor Virginia R. Chavis, chair • 116 Meek Hall  
<http://www.olemiss.edu/depts/art/>

Overview: The Department of Art offers a Bachelor of Arts (B.A.) and minor in art history and a Bachelor of Arts (B.A.), Bachelor of Fine Arts (B.F.A.), Master of Fine Arts (M.F.A.), and minor in art. For the B.F.A. in art, students complete an emphasis in ceramics, graphic/Web design, imaging arts, painting, printmaking, or sculpture. For the M.F.A. in art, students complete a specialization in ceramics, painting, printmaking, or sculpture.

Accreditation: All degree offerings of the Department of Art are fully accredited by the National Association of Schools of Art and Design.

#### **M.F.A. in Art**

Description: The M.F.A. is the terminal degree in studio art and is the professional degree preparing students to teach at the university level. Students choose a specialization in ceramics, painting, printmaking, or sculpture.

Preliminary Requirements: All applicants must submit evidence of course work or the equivalent that is comparable to the B.F.A. degree offered at The University of Mississippi. The applicant must also present 20 works identified by media, size, and date of completion.

Course Requirements: The M.F.A. in art degree requires the successful completion of Art 692 (taken during the fall semester of the first year of residence); 6 hours of Art 697 (Thesis); 12 hours of art history, including AH 503 (Art Theory and Criticism); 18 hours of a specific studio specialization (ceramics, painting, printmaking, or sculpture); 15 semester hours from at least two studio areas other than the area of specialization; and 9 hours of electives. A minimum of 6 hours must be taken in drawing, either as part of the 15 hours of secondary specialization or as electives.

Other Academic Requirements: After completing at least half of the degree requirements, a student may be advanced to candidacy after being reviewed favorably by the graduate faculty in the general review of all students, which takes place each semester. During the last semester in residence, each student is required to register for Art 697 (Thesis) and to install a thesis exhibition with the advice of the student's thesis director.

It is required that the candidate successfully pass an oral examination, open to all faculty and graduate students, and a written analytical and critical exposition of the creative thesis. In addition to the illustrative matter accompanying the written thesis, a minimum of five images must be deposited with the Department of Art for purposes of documentation. The candidate's thesis committee may recommend the collection of a thesis work for the Department of Art's permanent collection of art. Note: This is according to the College Art Association (CAA) policies.

#### Documentation and Retention of Student Work

Documentation of MFA exhibitions should be required and kept by the institution as a matter of record. Weighing considerations of maintenance and media, institutions should be encouraged to purchase one or more examples of work for the permanent collection, if possible. CAA, in its resolution of April 29, 1972, has discouraged the all-too-prevalent past practice of institutions demanding, without compensation, examples of student work. The acquisition of student work assumes the existence of adequate display and/or storage facilities for artwork. The issues of conservation and restoration should also be considered before student work is purchased.

#### Art

**508. ARTS ADMINISTRATION.** Principles and practices of arts management and administration. Interdisciplinary approach covers museology, fundraising, grant writing, appraising, accounting, laws, and publications . (3)

**510. STUDIO ART ON LOCATION.** Emphasis on studio art practice in a location other than the UM campus. Content varies. May be repeated once for credit. Prerequisite: Instructor Approval Required. (3)

**511. DRAWING.** Advanced problems including special problems designed on an individual basis, with emphasis on drawing as a final form of expression. Mixed media. May be repeated for credit for a maximum of 9 hours. (3)

**512. FIGURE DRAWING.** Advanced drawing from the live model including special problems designed on an individual basis. May be repeated for credit for a maximum of 6 hours. (3)

**515. CRAFT OF OLD MASTER DRAWINGS & PAINTINGS.** Technical (studio) exploration and historical appreciation of a variety of drawing and painting media generally uncommon in contemporary art: silver and leadpoint, chiaroscuro, quill and reed pens with bistre and iron-gall inks, natural and fabricated chalks, egg tempera, encaustic, oil glazing and fresco (buon fresco), and handmade paper. (3)

**521. PAINTING.** Special problems in painting with emphasis on individual development. May be repeated for credit for a maximum of 18 hours. (3)

**526. WATERCOLOR.** Advanced work in water-based media on paper including special problems designed on an individual basis. May be repeated for credit for a maximum of 6 hours. (3)

**531. SCULPTURE.** Special problems in sculpture with emphasis on individual development. May be repeated for a maximum of 18 hours. (3)

**532. HEAD MODELING.** Independent investigation in modeling the human head from life. May be repeated once for credit. Prerequisite: Instructor Approval Required. (3)

**533. FIGURE MODELING.** Independent investigation in modeling the human figure from life. May be repeated once for credit. Prerequisite: Permission of instructor. Prerequisite: Instructor Approval Required. (3)

**541. POTTERY AND CERAMICS.** Special problems in pottery and ceramics with emphasis on individual development. May be repeated for a maximum of 18 hours. (3)

**560. VECTOR IMAGING.** Instruction in Adobe Illustrator, the standard illustration program used by designers, on a Macintosh platform. Introduction to vector graphics with emphasis on both technical and artistic mastery for advanced art students. (3)

**561. TYPOGRAPHY.** Formal aspects of graphic design with emphasis on typography in the graphic design process; a history of type design and applied problems in composing publications with type, and the use of the computer in completing projects for advanced art students. (3)

**564. WEB DESIGN I.** Theoretical and technical exploration of the various uses for computer-based imagery, including basic multimedia and Internet development. HTML and Macromedia FLASH are introduced to advanced art students. (3)

**565. WEB DESIGN II.** Advanced conceptual and technical exploration of Web design with Macromedia Dreamweaver. Topics may include historical issues in computer graphics, Internet development, multimedia, two-or three-dimensional animation and static image manipulation. May be repeated once for credit. Prerequisite: Art 364 or Art 564. (3)

**571. PRINTMAKING.** Special problems in painting with emphasis on individual development. May be repeated for a maximum of 18 hours. (3-6)

**573. BOOK ARTS.** Exploration of handmade books, including alternative bookbinding structures and successful integration of printed image and text. May be repeated once for credit. (3)

**581. BLACK-AND-WHITE PHOTOGRAPHY.** Instruction for advanced art students in black-and-white photography with emphasis on the mechanics of 35 mm camera skills, darkroom techniques, and developing a personal photographic style. Focus on a fine art approach to image making. May be repeated twice. (3)

**583. DIGITAL PHOTOGRAPHY.** Acquisition of the technical language of the digital image by advanced art students and development of a personal photographic style. Emphasis is a fine art approach to digital image making. May be repeated twice. (3)

**584. DIGITAL VIDEO.** Technical and conceptual foundation of time-based media for advanced art students. Includes single camera production, storyboard production, lighting and post production editing. May be repeated twice. (3)

**598. SPECIAL TOPICS IN STUDIO ART.** Topics in studio art. Content varies. May be repeated once for credit. (3)

**611. DRAWING.** Advanced problems including special problems designed on an individual basis, with emphasis on drawing as a final form of expression. (May be repeated for credit for a maximum of 24 hours). (3-6)

**621. PAINTING.** Special problems in painting with emphasis on individual development. May be repeated for a maximum of 24 hours. (3-6)

**631. SCULPTURE.** Special problems in sculpture with emphasis on individual development. May be repeated for a maximum of 24 hours. (3-6)

**641. POTTERY AND CERAMICS.** Special problems in pottery and ceramics with emphasis on individual development. May be repeated for a maximum of 24 hours. (3-6)

**660. VECTOR IMAGING.** Instruction in Adobe Illustrator, the standard illustration program used by designers on a Macintosh platform. Introduction vector graphics with emphasis on both technical and artistic mastery for advanced art students. (3)

**661. ADVANCED TYPOGRAPHY.** Formal aspects of graphic design with emphasis on typography and its uses in graphic design process, history of type design and applied problems composing publications with type and use of the computer in completing projects. (3)

**664. WEB DESIGN I.** Theoretical and technical exploration of uses for computer-based imagery, including basic multimedia and Internet development. HTML and Macromedia FLASH art introduced. May be repeated once for credit. (3)

**665. WEB DESIGN II.** Advanced conceptual and technical exploration of Web design with Macromedia Dreamweaver. Topics may include historical issues in computer graphics, Internet development, multimedia, two-or three-dimensional animation and static image manipulation. Prerequisite: Art 664. (3)

**671. PRINTMAKING.** Special problems in printmaking with emphasis on individual development. May be repeated for a maximum of 24 hours. (3-6)

**683. DIGITAL PHOTOGRAPHY.** This course emphasizes a fine art approach to digital image making. Students will develop a personal photographic style and learn about theoretical, conceptual and contemporary issues surrounding digital photography. May be repeated once for credit. (3)

**691. DIRECTED INDIVIDUAL PROBLEMS.** (1-6)

**692. PROFESSIONAL PRACTICES.** Selected topics on art as a profession. Required of all graduate students. (1)

**697. THESIS.** No Grade. (1-6)

#### **Art History-AH**

**503. ART THEORY AND CRITICISM.** Topics and problems surrounding the nature of aesthetic theory are discussed. Interdisciplinary approach, with analysis of specific works of art. (3)

**505. TOPICS IN ART HISTORY.** Lecture and discussion on a selected area of art history or art criticism. May focus on a specific artist, style, period, cultural group, or technical or methodological problem. Content varies. May be repeated once for credit. Prerequisite: Instructor Approval Required. (3)

**508. SEMINAR IN ART HISTORY.** Specific problems in art emphasizing both individual research and contributions to the seminar group on advanced, in-depth topics. Content varies. May be repeated once for credit. Prerequisite: Instructor Approval Required. (3)

**520. TOPICS IN ANCIENT ART.** Content varies. May be repeated once for credit. (Same as Clc 523). (3)

**530. TOPICS IN MEDIEVAL ART.** Content varies. May be repeated once for credit. (3)

**540. TOPICS IN EARLY MODERN ART.** Content varies. May be repeated once for credit. (3)

**541. ITALIAN RENAISSANCE ART.** Major developments in the graphic arts, painting, sculpture, and architecture in Italy from the Dugento (13th century) through 16th century "Mannerism". (3)

**543. NORTHERN RENAISSANCE ART.** A study of graphic arts, painting, sculpture, and architecture in Germany, France, and the Netherlands from 14th through the 16th centuries including "Mannerism". (3)

**545. BAROQUE AND ROCOCO ART AND ARCHITECTURE.** History and analysis of European art from the 17th century to the French Revolution. (3)

**550. TOPICS IN MODERN ART: EUROPE AND AMERICA.** Content varies. May be repeated once for credit. (3)

**551. 19TH-CENTURY EUROPEAN ART.** An examination of the major European art styles from Neoclassicism through Post-Impressionism. (3)

**555. 20TH CENTURY ART.** A study of 20th-century American and European art. (3)

**557. MODERN ARCHITECTURE & INDUSTRIAL DESIGN.** The development of 19th and 20th century architectural and industrial design in Europe and America with an emphasis on new materials and engineering. (3)

**559. CONTEMPORARY ART AND ARCHITECTURE.** Contemporary art with special emphasis on American and European art. (3)

**560. TOPICS IN AMERICAN ART.** Content varies. May be repeated once for credit. (3)

**561. AMERICAN ART TO 1900.** History of American painting, sculpture, architecture, interiors, furniture, and other decorative arts and folk art from the Colonial period to 1900. (3)

**565. SOUTHERN FOLK ARTS.** Interdisciplinary approach to the history of folk arts in the Southern United States. Emphasis on field research and development of exhibits. (3)

**566. HIST OF SOUTHERN ART & DECORATIVE ARTS.** Southern painting, sculpture, printmaking, and decorative arts from 18th-century seaboard culture to the present. Course will stress indigenous Southern characteristics and adaptation of imported styles and attitudes. (3)

**567. SOUTHERN ARCHITECTURE AND INTERIORS.** Southern architecture and interiors from 18th-century seaboard culture to the present. Course will stress indigenous Southern characteristics and adaptation of imported styles and attitudes. (3)

**569. SURVEY OF BLACK AMERICAN ART.** History and appreciation of the art of black Americans with emphasis on painting, sculpture, architecture, and other plastic art forms. (3)

**578. HISTORY OF PRINTMAKING.** Graphic art in Western Europe, the United States, and Asia from the 15th century to the present. (3)



**586. AFRICAN AND AFRICAN AMERICAN ARTS.** Interdisciplinary approach to the continuities between traditional and contemporary African and African American arts, with emphasis on architecture, sculpture, ceramics, textiles, basketry, jewelry, dance, and music. (3)

**594. MESOAMERICAN ART.** Interdisciplinary approach to the history of the arts of Mesoamerica, from 1500 B.C.E. to the Spanish conquest, covering Olmec, Maya, Mixtec, and Aztec civilizations. (3)

**690. SELECTED READINGS: ART HIST & CRITICISM.** Readings designed to meet the individual needs of the students. (1-3)

**ASTRONOMY** See Physics and Astronomy.

**AUDIOLOGY** See Communication Sciences and Disorders.

## **BIOLOGY — BISC**

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Professor Paul K. Lago, chair • 214 Shoemaker Hall

<http://www.olemiss.edu/depts/biology/>

Overview: The Department of Biology offers the Master of Science (M.S.) and the Doctor of Philosophy (Ph.D.) degrees in biological science.

Preliminary Requirements: A candidate for admission to the M.S. and Ph.D. programs in the Department of Biology must submit online to the Graduate School an application; official scores for the Graduate Record Exam (GRE) general test; official transcripts of all undergraduate and graduate course work; a statement of research interests; and two letters of recommendation. All entering graduate students must be accepted by a major adviser (who will become their thesis director) before admission into the biology graduate program. International students must submit English Language Proficiency test scores (TOEFL, IELTS or PTE-A). Students from countries with English as their official language are exempt from English Language Proficiency requirements. Acceptable results on the TSE or SPEAK tests of spoken English are required for international students to be eligible for a teaching assistantship. Candidates must (a) satisfy the Graduate School admission requirements, (b) have an undergraduate degree (B.A. or B.S.), (c) have a strong record of achievement in biology, chemistry, and mathematics. Admission is also contingent upon a faculty member agreeing to serve as thesis or dissertation adviser.

New graduate applications will normally be reviewed once per year during February/March. The committee reserves the right to consider applicants outside the review period if a compelling reason is provided by the adviser.

### **M.S. in Biological Science**

Description: The M.S. in biological science prepares a student for various academic, industrial, or governmental professional positions that involve, among others, freshwater biology, medicine, education, plant sciences, molecular genetics, ecology, and conservation biology.

Course Requirements: A minimum of 30 semester hours of graduate credit acceptable to the advisory committee are required, which must include 6 thesis hours and at least 18 hours of formalized course work, that is, courses that require regular attendance, study assignments, final exams, and letter grades. The remaining 6 hours may include formal courses, seminars or nontraditional courses. All students must take Bisc 691 during the semester in which they present a seminar. A cumulative average of not less than B (3.0) must be achieved in all graduate work taken.

All students pursuing an M.S. degree must satisfactorily complete a research prospectus (including a departmental presentation), a thesis based on potentially publishable research, and one seminar on their

research (which is part of the defense). Additional requirements may be stipulated by the advisory committee.

#### Other Academic Requirements

Thesis Advisory Committee — During the first two semesters, a master's student should become familiar with the research programs in the department and establish an advisory committee. The thesis advisory committee's initial role is to recommend courses and to approve a research topic. The committee is then responsible for evaluating the student's course work, research productivity, knowledge of the research topic, and for approving the thesis.

#### **Ph.D. in Biological Science**

Description: The Ph.D. in biological science is a research degree. It prepares graduates for various academic, industrial, or governmental professional positions that involve, among others, freshwater biology, medicine, education, plant sciences, molecular genetics, ecology, and conservation biology.

Course Requirements: A minimum of 54 semester hours of graduate credit acceptable to the advisory committee are required, which must include 18 dissertation hours and at least 24 hours of formalized course work. All students must take Bisc 691 during the semesters in which they present seminars. The M.S. degree is not a prerequisite for the Ph.D. degree.

Students must satisfactorily complete a research prospectus (including a departmental presentation), a dissertation based on potentially publishable research, and two seminars on their research (one of which is part of the dissertation defense; the second may be a departmentally approved presentation at a professional meeting). Additional requirements may be stipulated by the advisory committee.

Once course work and departmental presentation of the research prospectus have been completed, a written and oral comprehensive examination will be administered by the committee. Upon satisfactory completion of the comprehensive examination, and before the student begins the final 12 months, the advisory committee shall request the department chair to recommend admission to candidacy. Students must complete all requirements for the degree within five years from the date of the comprehensive examination.

#### Other Academic Requirements

Dissertation Advisory Committee — During the first two semesters, a Ph.D. student should become familiar with the research programs in the department and establish an advisory committee. The committee's initial role is to recommend courses and approve a research topic. The committee is then responsible for evaluating the student's course work, research productivity, and knowledge of the research topic, and for approving the dissertation.

#### **Biological Science-Bisc**

**502. MYCOLOGY.** Fungi of economic importance; their distribution, biology, and control; collection, identification, and nutrition. Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C. (4)

**504. BIOMETRY.** A course on analysis of biological data using parametric and nonparametric statistics. Prerequisite: 15 hours of Bisc courses, Math 121 or higher with a minimum grade of C. (4)

**505. AQUATIC MICROBIOLOGY.** Principles and applications of the microbiology of lakes, reservoirs, streams, oceans, and sewage treatment processes. Prerequisite: Bisc 333 with minimum grade of C. (4)

**509. MICROBIAL GENETICS.** Genetics and molecular biology of bacteria and viruses. Prerequisite: Bisc 333 with minimum grade of C. (4)

**510. THEORETICAL ECOLOGY.** Advanced course in ecology emphasizing modern conceptual and mathematical models of ecological phenomena. Students will use the computers in the simulation of the above processes. Prerequisite: Bisc 322 with minimum grade of C, Math 121 with minimum grade of C. (3)

**511. APPLIED MICROBIOLOGY.** Applications of microorganisms in industry, agriculture, food and beverage production, wastewater treatment, biohydrometallurgy, and bioremediation of environmental pollutants. Prerequisite: Bisc 333 with minimum grade of C. (4)

**512. ANIMAL BEHAVIOR.** The significance of the behavior of animals with emphasis on current evolutionary and ecological approaches. Topics include genetics of behavior, adaptation, fitness, behavioral polymorphism, and communication. Prerequisite: Bisc 322 with minimum grade of C. (4)

**513. LIMNOLOGICAL METHODS.** Field and laboratory techniques in freshwater ecology. (1 lecture, 4 lab hours). Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C. (3)

**514. POPULATION GENETICS.** Basic principles of the factors that influence the genetic composition of natural and artificial populations. Topics covered will include selection, migration, mutation, genetic drift, mating systems, and quantitative genetics. Prerequisite: Bisc 336 with minimum grade of C, Math 121 with minimum grade of C. (3)

**515. CONSERVATION BIOLOGY: VIABLE POPULATIONS.** A course on the genetics, evolution, and population ecology of endangered and threatened species of plants and animals. The course will concentrate on the application of theory to predicting population viability and preventing extinction. Prerequisite: Bisc 322 with minimum grade of C, Bisc 336 with minimum grade of C, Math 121 with minimum grade of C. (3)

**516. PLANT PHYSIOLOGY.** Growth and development in plants; emphasis on assimilation, chemical control of growth, and environmental physiology. (3 lecture, 2 lab hours). Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C, Chem 105 with minimum grade of C, Chem 106 with minimum grade of C. (4)

**518. MICROTECHNIQUE.** Techniques of fixing, embedding, sectioning, and staining tissue. Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C, Bisc 415 grade of C or better, or consent of instructor. (4)

**519. PHYSIOLOGY OF AQUATIC ANIMALS.** The physiology and physiological adaptations of aquatic animals, with emphasis on freshwater animals. Prerequisite: Bisc 330 with minimum grade of C. (4)

**520. MEDICAL MICROBIOLOGY.** The nature of infectious microorganisms with emphasis on mechanisms of pathogenicity and epidemiology. Prerequisite: Bisc 333 with minimum grade of C. (3)

**521. CELL PHYSIOLOGY.** Basic principles and practices of molecular and cellular physiology. (3 lecture, 2 lab hours). Prerequisite: Bisc 330 with minimum grade of C, Chem 221 with minimum grade of C, Chem 222 with minimum grade of C. (4)

**522. MICROBIAL ECOLOGY.** Factors that govern the interrelationships between microorganisms and their environments, including microbial energetics, nutrient cycles, aquatic and terrestrial environments, microbial interfaces, methodology. Prerequisite: Bisc 333 with minimum grade of C. (3)

**523. MOLECULAR MICROBIOL. OF SOILS & SEDIMENT.** A course emphasizing habitats and microorganisms found in the soil and sediments and their relationship to soil management, agricultural production, and environmental quality. Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C. (3)

**524. AQUATIC BOTANY.** Ecology and physiology of vascular plants occurring in fresh water. Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C. (4)

**525. CONSERVATION AND RESTORATION ECOLOGY.** Addresses the efficacy of applying principles of population, community, and landscape ecology to the design, restoration, management, and

protection of biological reserves. Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C. (3)

**526. SURVEY OF THE AMPHIBIA.** An introduction to the taxonomy, morphology, and evolution of salamanders, frogs, and caecilians. May not be counted for credit if Bisc 546 or Bisc 640 is counted.

Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C. (3)

**527. SURVEY OF THE REPTILIA.** An introduction to the taxonomy, morphology, and evolution of crocodylians, snakes, lizards, amphisbaenians, and turtles. May not be counted for credit if Bisc 641 is counted. Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C. (3)

**528. PRINCIPLES OF DEVELOPMENTAL BIOLOGY.** Study of the development of animals and plants, with emphasis on the molecular genetic basis of developmental events. Fundamental questions, concepts, and methodologies of inquiry into genetic and cellular mechanisms of development will be explored. Prerequisite: Bisc 440 with minimum grade of C. (4)

**529. ENDOCRINOLOGY.** Vertebrate endocrine systems. Prerequisite: Bisc 330 with minimum grade of C, Chem 221 with minimum grade of C, Chem 222 with minimum grade of C. (3)

**530. ADVANCED FIELD STUDY IN ECOLOGY.** Extended field trip experience illustrating ecological principles, biological diversity, and major biotic regions; may be repeated for credit if topic changes.

Prerequisite: Bisc 322 with minimum grade of C, Instructor Approval Required. (4)

**531. PLANT MORPHOLOGY.** Development and life histories of major plant groups: emphasis on vascular plants. Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C, Any 300-level or above BISC course , Any 300-level or above BISC course . (4)

**532. PLANT TAXONOMY.** Survey of the diversity of vascular plants of the world, including their historical and modern classification, nomenclature, and identification. Prerequisite: Bisc 318 with minimum grade of C. (4)

**533. ADVANCED NEUROSCIENCE.** In-depth exploration of core tenets of neuroscience. Lectures followed by discussion of seminal or recent papers related to lecture topics. Prerequisite: Bisc 327 & (Bisc 330 or 331); or B min in Psy 319; or Graduate Standing. (3)

**534. FRESHWATER INSECTS.** Identification and biology of insects associated with fresh water. (2 lecture, 4 lab hours). Prerequisite: Bisc 337 with minimum grade of C. (4)

**541. CELL BIOLOGY OF NEURODEGENERATIVE DISEASES.** Cellular aspects of neurodegenerative diseases, with an emphasis on Parkinson's disease. Prerequisite: Bisc 330 or Bisc 327. (3)

**542. MICROBIAL DIVERSITY.** Ecology, physiology, and taxonomy of microorganisms isolated from natural habitats. Prerequisite: Bisc 333 with minimum grade of C. (4)

**543. FUNCTIONAL NEUROANATOMY.** An in-depth examination of the structure and function of the vertebrate central nervous system. Prerequisite: Bisc 327 & (Bisc 330 or 331); or B min in Psy 319; or Graduate Standing. (3)

**545. MICROBIAL PHYSIOLOGY.** Biochemical processes of microbial cells. Prerequisite: Bisc 333 with minimum grade of C. (4)

**546. HERPETOLOGY.** Studies on the systematics, morphology, evolution, and natural history of amphibians and reptiles. (2 lecture, 4 lab hours). (May not be counted for credit if Bisc 548 and 549 are counted). Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C. (4)

**547. ADVANCED HISTOLOGY.** Essential features of microscopic anatomy and development of selected tissues and organs. Prerequisite: Bisc 415 with minimum grade of C. (4)

**550. BIOLOGICAL OCEANOGRAPHY.** Course examines the biota of the world's oceans and its relationship to the abiotic environment. Physical, chemical, and geological aspects of oceanography also will be considered. Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C,

Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C, 16 hrs of 300-level or above BISC courses , 16 hrs of 300-level or above BISC courses. (4)

**551. PROTOZOOLOGY.** Structure, reproduction, growth, collection, and methods of culture of protozoa organisms. Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C, Instructor Approval Required. (4)

**553. COMPARATIVE ANIMAL PHYSIOLOGY.** Comparative and integrative investigation of the structure and mechanisms of the physiological systems of animals. Emphasis on adaptive strategies expressed in physiological systems. Prerequisite: Bisc 330 with minimum grade of C. (3)

**554. ECOLOGICAL PHYSIOLOGY.** Systemic function of organisms in relation to the natural environment. Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C. (4)

**555. RADIATION BIOLOGY.** Effects of radiation on living material at all levels of organization. (3 lecture, 2 lab hours). Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C, Instructor Approval Required. (4)

**566. EVOLUTIONARY BIOLOGY.** Lectures and assigned readings on modern evolutionary theories, with emphasis on speciation and processes operating at the population level of organization. Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C, 15 hours of Bisc courses. , 12 hours of Criminal Justice courses and overall GPA of 3.0 or higher. (3)

**567. EVOLUTIONARY BIOLOGY LABORATORY.** Laboratory to accompany Bisc 566. (2 lab hours). Corequisite: Bisc 566. Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C, 15 hours of Bisc courses. , 12 hours of Criminal Justice courses and overall GPA of 3.0 or higher. (1)

**571. HISTORY OF BIOLOGY.** Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C. (3)

**579. ADVANCED TOPICS IN BIOLOGY.** Advanced topics in biology for both graduate and undergraduate students. Topics may vary. This course may be repeated once for credit with a different topic. Prerequisite: Bisc 160 with minimum grade of C, Bisc 161 with minimum grade of C, Bisc 162 with minimum grade of C, Bisc 163 with minimum grade of C. (1-3)

**604. DESIGN & ANALYSIS OF ECOLOGICAL EXPER.** Design of ecological experiments; replication, blocking, and treatment structures; analysis of designed experiments; procedures for data sets with missing observations or incompletely executed designs. Prerequisite: Bisc 504 with minimum grade of C. (3)

**608. LIMNOLOGY.** The physical, chemical, geological, and biological aspects of lake and reservoir environments. (3)

**609. STREAM ECOLOGY.** Ecosystem structure and function of streams with emphasis on primary literature and application of field methods. (3)

**610. VIROLOGY.** Fundamental biology and biochemistry of bacterial, animal, and plant viruses. (2 lecture, 4 lab hours). (4)

**611. WETLANDS ECOLOGY.** The ecology, energy dynamics, plant and animal adaptations to marsh and swamp ecosystems, with emphasis on primary literature. (3)

**613. PLANT ECOLOGY.** Autecology, population, and community ecology of vascular plants. (4)

**614. ADVANCED GENERAL MICROBIOLOGY.** Introduction to microbiology for graduate students. Prerequisite requirements for this course must also be satisfied by consent of instructor. Prerequisite: Chem 105 with minimum grade of C, Chem 106 with minimum grade of C. (4)

**615. ICHTHYOLOGY.** Classification natural history, and evolutionary biology of fishes. (2 lecture, 4 lab hours). Prerequisite: Bisc 329 with minimum grade of C. (4)

**616. POPULATION BIOLOGY.** Dynamics of genetic and ecological factors in determining the composition, size, and distribution of populations. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Bisc 322 with minimum grade of C. (3)

- 617. FISHERY BIOLOGY.** Research methods in freshwater fishery biology; life histories, environmental relations, and fishery management problems. (1 lecture, 4 lab hours). Prerequisite: Bisc 615 with minimum grade of C. (3)
- 618. COMMUNITY ECOLOGY.** Theory of natural community dynamics. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Bisc 322 with minimum grade of C. (3)
- 619. ECOSYSTEMS ECOLOGY.** Structure and function of ecological systems, emphasizing consideration of natural and man-made ecosystems and cybernetic aspects of system functions. (3)
- 620. FIELD BOTANY.** Taxonomy, distribution, ecology, and natural history of indigenous plants; methods of field study and collecting. (4)
- 621. BEHAVIORAL ENDOCRINOLOGY.** Advanced course investigating the endocrine basis of behavior in animals with emphasis on vertebrates. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Bisc 322 with minimum grade of C, Bisc 330 with minimum grade of C. (3)
- 622. BEHAVIORAL ECOLOGY.** Advanced course focusing on the evolutionary ecology of animal behavior. Prerequisite requirements for this course may also be satisfied by consent of instructor. It is highly recommended that students have training in mathematics through differential calculus. Prerequisite: Bisc 322 with minimum grade of C, Bisc 336 with minimum grade of C. (3)
- 623. AQUATIC PLANTS.** Taxonomy, distribution, and ecology of aquatic plants in the subkingdom Embryophyta; emphasis on freshwater species. Prerequisite: any two biology courses, 300 or above, which provide taxonomic training. (4)
- 626. AQUATIC ORNITHOLOGY.** The ecology, behavior, and taxonomy of aquatic birds, emphasizing adaptations to the freshwater environment. (3)
- 628. ADVANCED REPRODUCTIVE PHYSIOLOGY.** Biomechanical mechanisms involved in reproductive processes and endocrine interrelationship of their regulation. Emphasis will be on molecular events within the hypothalmo-pituitary-gonadal axis. Prerequisite: Bisc 335 with minimum grade of C. (4)
- 629. ADVANCED BIOCHEMICAL ENDOCRINOLOGY.** Mechanisms of action of hormones at the biochemical and molecular level. Review and journal articles will serve as text materials. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Chem 271 with minimum grade of C. (3)
- 630. ALGOLOGY.** Ecology and physiology of freshwater algae, including isolation, identification, and culture techniques. (2 lecture, 2 lab hours). Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Bisc 339 with minimum grade of C. (4)
- 631. ADVANCED AQUATIC TECHNIQUES.** Laboratory methods in freshwater systems, emphasizing advanced techniques and instrumentation. (4)
- 632. AQUATIC TOXICOLOGY.** Advanced principles of toxicology in aquatic systems. Topics include transport, distribution, transformation, and ultimate fate of chemicals in the aquatic environment. (4)
- 633. MICROBIAL ENERGETICS.** Thermodynamic consideration of energy flux applied to growth and survival of microorganisms in the environment. Biochemical and environmental aspects are presented. Prerequisite: Bisc 333 with minimum grade of C. (3)
- 635. INSECT TAXONOMY.** Orders, families, and important genera of North American adult and immature insects, principles and practice of insect classification. (2 lecture, 4 lab hours). Prerequisite: Bisc 337 with minimum grade of C. (4)
- 639. INSECT MORPHOLOGY.** Structure and form of important insect types. (2 lecture, 4 lab hours). Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Bisc 337 with minimum grade of C. (4)
- 640. BIOLOGY OF AMPHIBIA.** (3)
- 641. BIOLOGY OF REPTILIA.** (3)
- 647. INVERTEBRATE ZOOLOGY.** Morphology, life histories, ecology, and speciation of invertebrates, exclusive of insects. (4)

- 649. METHODS IN MOLECULAR BIOLOGY.** A laboratory course designed to acquaint the student with advanced instrumentation of molecular biology. (3)
- 650. INTRODUCTION TO RESEARCH IN BIOL SCI.** Scientific method, ethics, technical writing, bibliographic techniques, publication, technical presentation, and research funding in the biological sciences. (3)
- 651. ADVANCED PARASITOLOGY.** Principles of parasitology with emphasis on parasites that affect man. (2 lecture, 4 lab hours). (4)
- 659. TECHNIQUES IN MOLECULAR SYSTEMATICS.** This course will introduce students to current laboratory and analytical methods in molecular systematics, with extensive hands-on training in the lab and on the computer. (3)
- 660. PLANT ANATOMY AND DEVELOPMENT.** Internal construction and development of plants. Technical expertise will be gained using classical and modern histological techniques. (4)
- 661. PHYLOGENETIC SYSTEMATICS.** Conceptual and practical approaches to estimating and evaluating relationships among organisms. Themes include morphological, molecular, and paleontological evolution. (4)
- 662. MULTIVARIATE ANALYSIS OF ECOLOGICAL DATA.** A survey of multivariate statistical techniques currently and widely used in ecology, emphasizing nonparametric and nonlinear analyses. Prerequisite: Bisc 504. (3)
- 675. ADVANCED MICROBIAL PHYSIOLOGY.** Regulatory mechanisms, enzymology, and bioenergetics of microbial systems. (3)
- 676. TOPICS IN EVOLUTIONARY PHYSIOLOGY.** Advanced topics in evolutionary physiology. May be repeated three times if topic changes. (3)
- 677. TOPICS IN EVOLUTION AND ECOLOGY.** Advanced topics in evolution and ecology. May be taken up to three times if topics change. (3)
- 678. TOPICS IN ENVIRONMENTAL & APPLIED MICRO.** Topics in advanced microbiology. May be retaken up to three times if topics change. (3)
- 679. DIRECTED STUDY IN BIOLOGICAL SCIENCE.** Assigned readings and independent research projects conducted under the supervision of faculty of the biology department. Provides opportunities for hands-on experience in areas of mutual student-faculty interest. A written research report is required. Course may be repeated when topic changes. Prerequisite: Instructor Approval Required. (1-3)
- 691. SEMINAR.** Lectures by faculty, visiting lecturers, and graduate students. (May be repeated for credit as required by the department). (1)
- 692. SEMINARS ON SPECIAL TOPICS.** A series of seminars on selected topics of concern to biological scientists. The theme of each series will be announced prior to registration. Seminar participants should expect to research primary literature sources and to prepare written summaries and oral seminars on assigned subjects. This course may be repeated for credit provided no two themes are identical. No more than 2 hours may be used to satisfy minimum credit hour requirements for a degree. (1)
- 693. MICROBIOLOGY SEMINAR.** (May be repeated for credit). (1)
- 697. THESIS.** No grade. (1-12)
- 797. DISSERTATION.** No grade. (1-18)

**CENTER FOR THE STUDY OF SOUTHERN CULTURE** See **Southern Studies**.

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**CHEMISTRY AND BIOCHEMISTRY — CHEM**

Professor Charles L. Hussey, chair • 322 Coulter Hall

<http://www.olemiss.edu/depts/chemistry/>

Overview: The Department of Chemistry and Biochemistry offers the Master of Science (M.S.), Doctor of Arts (D.A.), and Doctor of Philosophy (Ph.D.) degrees in chemistry. Students may specialize in analytical, inorganic, organic, physical chemistry, or biochemistry.

### **M.S. in Chemistry**

Description: The M.S. degree in chemistry is designed for students who intend to seek employment as a professional chemist or who plan to pursue the D.A. degree in chemistry at UM. This program requires the submission of a thesis based on original laboratory or theoretical research. The M.S. degree is not a prerequisite for the Ph.D. degree.

Preliminary Requirements: For admission in full standing to the M.S. program, applicants must have completed a baccalaureate degree in chemistry or a closely related subject. All applicants should have completed the following undergraduate core requirements:

- Analytical chemistry: quantitative analytical chemistry and instrumental analysis
- Biochemistry: one semester
- Inorganic chemistry: one-semester course plus lab
- Organic chemistry: two semesters with lab
- Calculus-based physical chemistry: two-semester, junior-level course

Chemistry is a multidisciplinary science, and some applicants with undergraduate degrees in closely related areas may wish to pursue an advanced degree in chemistry. Applicants who have not completed the above core requirements may still be admitted on a case-by case basis and will be required to remedy all deficiencies. If an applicant has not completed two semesters of organic chemistry, two semesters of physics, and two semesters of calculus, they will be asked to complete these courses and then reapply.

GRE and TOEFL Scores: Applicants must submit a satisfactory GRE score on the general exam. The chemistry subject exam is not required, but it can enhance an applicant's chances for admission. In addition, students whose native language is not English must report a satisfactory TOEFL score to be admitted.

Preliminary Examinations: All entering graduate students are required to take five orientation examinations in the discipline areas of analytical, inorganic, organic, and physical chemistry and biochemistry. These exams are ACS standardized exams or equivalent and test the student's mastery of these subject areas at the undergraduate level. The results of these examinations are used to place students in the appropriate courses for their first semester of enrollment. Students who score low on a particular exam will be judged to be deficient in that area and will be required to take the appropriate remedial or intermediate courses before taking any additional course work from that area.

Course Requirements: For the M.S. degree, a minimum of 30 hours of graduate credit are required, which must include 18 hours of formal nonremedial lecture courses, 2 hours of seminar (Chem 650), 3 hours of Chem 600, and 6 hours of thesis (Chem 697). Credit for previous graduate-level course work may be applied towards these requirements at the discretion of the student's advisory committee and with approval by the department chairman.

All M.S. and Ph.D. students must take one CORE COURSE from each of four of the five specialty areas. Core courses for each area are:

Analytical Chemistry (Chem 512, 515),  
Biochemistry (Chem 534, 671),  
Inorganic Chemistry (Chem 601, 602),



Organic Chemistry (Chem 527, 528),  
Physical Chemistry (Chem 531, 532, 536).

A cumulative average of not less than B is required in the core courses. A minimum grade of B is also required in each course in the student's area of specialization. These course and credit requirements are minimum requirements and may not be satisfied with remedial courses. Specific requirements for individual students in excess of the minimum may be imposed by the student's adviser and advisory committee.

#### Other Academic Requirements

**Thesis:** A thesis, which must be a formal written account of the student's research results, is required of all M.S. degree candidates. The thesis is defended by the student in a final oral examination, which typically follows the student's final seminar. The student's advisory committee conducts the examination, which is not restricted to the content of the thesis.

**Final Oral Examination:** Satisfactory performance on an oral examination, as judged by the student's advisory committee, completes the competency requirements for the degree. This examination includes, but is not limited to, a defense of the student's thesis.

**Seminar Presentations:** Each student must make an initial oral presentation, which may be either a research seminar or a literature seminar to the assembled faculty and students of the department. The seminar will be evaluated by the faculty in attendance. Each student must also present a final seminar based on the contents of his or her dissertation or thesis to the same audience.

#### **D.A. in Chemistry**

**Description:** The department offers the D.A. degree in chemistry to persons whose goal is a career of teaching at two-year or four-year colleges. The program prepares students to be broadly competent in the field of chemistry and provides them with skill in effective classroom and laboratory teaching. This chemistry degree is an alternative to doctoral degrees in science education.

**Preliminary Requirements:** Applicants for the D.A. program are expected to have received a master's degree (M.S.) in chemistry. However, students with only an undergraduate degree in chemistry may enroll in the program provided they remedy any course deficiencies and complete two semesters (6 hours) of laboratory or theoretical thesis research (Chem 697). The results of this research must be presented to the department in the form of a written report and a seminar presentation. If the doctoral thesis is based on the same project, it must be a substantial extension of the initial work presented in this report.

**Course Requirements:** A minimum of 49 semester hours of graduate credit approved by the student's advisory committee are required: 12 hours of core courses chosen from Chem 601, 512, 527, 531, and 671; 6 additional hours of fundamental courses chosen from Chem 519, 532, 544, and 563; 3 hours of Chem 600; 3 hours of Chem 545; 3 hours of seminar; 6 hours of related science (from two sciences); 6 hours of education courses emphasizing curriculum and course development; 4 hours of instructional internship (Chem 717); and 6 hours of doctoral thesis (Chem 796). Transfer credit will be accepted where appropriate. Specific requirements in excess of the minimum requirements stated above may be imposed by the student's adviser and/or advisory committee.

#### Other Academic Requirements

**Comprehensive Examination:** The student must successfully complete a comprehensive examination in general chemistry, containing both oral and written parts, before admission to candidacy.

Doctoral Essay: The doctoral essay may be experimental in nature or an analysis of literature data; it may be in the area of chemical education, environmental chemistry, consumer products, materials science, research conducted by the student, or any topic approved by the student's advisory committee. The doctoral essay must give rise to at least one manuscript submitted for publication to an American Chemical Society journal such as the Journal of Chemical Education or a comparable journal.

Final Oral Examination: Satisfactory performance on an oral examination, as judged by the student's advisory committee, completes the competency requirements for the graduate degree. This examination includes, but is not limited to, a defense of the student's doctoral essay.

### **Ph.D. in Chemistry**

Description: The Ph.D. degree is the terminal degree in chemistry and designed for those who intend to seek employment as a professional chemist in academia, industrial, or government research laboratories, or in other vocations where specialized knowledge in chemistry is desired or required.

#### **Preliminary Requirements**

Applicant Educational Background: For admission to full standing in the Ph.D. program, the requirements are the same as for admission to the M.S. program.

Course Requirements: For the Ph.D. degree, 54 semester hours of graduate credit are required, which must include 3 hours of Chem 600, 18 hours of formal nonremedial lecture courses, 3 hours of seminar (Chem 650 and Chem 659), and 18 hours of dissertation (Chem 796). Credit for previous graduate-level course work may be applied toward these requirements at the discretion of the student's advisory committee and with approval by the department chair. A minimum grade of B is required in each course in the student's area of specialization.

All M.S. and Ph.D. students must take one CORE COURSE from each of four of the five specialty areas. Core courses for each area are:

Analytical Chemistry (Chem 512, 515),  
Biochemistry (Chem 534, 671),  
Inorganic Chemistry (Chem 601, 602),  
Organic Chemistry (Chem 527, 528),  
Physical Chemistry (Chem 531, 532, 536).

A cumulative average of not less than B is required in the core courses. A minimum grade of B is also required in each course in the student's area of specialization. These course and credit requirements are minimum requirements and may not be satisfied with remedial courses. Specific requirements for individual students in excess of the minimum may be imposed by the adviser and the student's advisory committee.

#### **Other Academic Requirements**

Seminar Presentations: Each Ph.D. student must make three seminar presentations: an initial oral presentation, which may be either a research seminar or a literature seminar, to the assembled faculty and students of the department; an oral or poster presentation describing the student's research; and a final seminar based on the student's dissertation to the assembled faculty and students of the department. Seminars given at UM will be evaluated by the faculty members in attendance. A poster given at a local event must be evaluated by at least three faculty in attendance, whereas a poster or talk given at a national or regional scientific meeting will be evaluated by the student's adviser.

**Comprehensive Examination Requirement:** A series of cumulative examinations and a research proposal/dissertation prospectus constitutes the student's comprehensive examination requirements for the Ph.D. degree. A Ph.D. student must pass the comprehensive exam requirement no later than the end of the third full year in the program.

**Cumulative Examinations:** A Ph.D. student must pass a minimum of four cumulative examinations. Some divisions may impose a higher number than four. Each division will offer at least one examination per semester, and the topic and method of the examination will be announced at least two weeks before the examination. The distribution of examinations among the various divisions will be decided by the student's advisory committee. A student may receive credit for no more than two exams from any one professor.

**Research Proposal/Dissertation Prospectus:** An original research proposal of 10-15 pages is prepared in a professional format on the subject of the student's dissertation research. The proposal should provide background information, preliminary results, work proposed to complete the dissertation, and original proposals for future directions beyond the dissertation project. It must reflect proper usage of the English language, especially grammar and spelling, and contain all relevant literature citations. The proposal is defended in an oral examination administered by the student's advisory committee. A three-page overview of the research proposal, outlining the work to be completed for the dissertation, will be submitted to the Graduate School as the dissertation prospectus, following approval by the student's advisory committee.

A dissertation, which must be a formal written account of the student's research, is required of all Ph.D. degree candidates. The dissertation is defended by the student in a final oral examination, which typically follows the student's final seminar. The student's advisory committee conducts the examination, which is not restricted to the content of the dissertation.

**Graduate Courses •** Approval of the department is prerequisite to registration for all graduate chemistry courses. Generally, physical chemistry based on calculus is prerequisite to all 500-level courses except 545, 546, and 547 and the intermediate level courses 513, 524, and 535. Upon recommendation by the instructor and approval by the department chair, prerequisites for a course may be waived in individual cases. Graduate courses in medicinal chemistry are considered an integral part of the graduate program in chemistry.

NOTE: Only courses marked \* are open to undergraduates.

NOTE: Courses marked \*\* may be repeated for credit on approval of the instructor if the topics are different from those previously selected.

### **Chemistry-Chem**

**512. ADVANCED INSTRUMENTAL ANALYSIS.** Theoretical and experimental treatment of gas and liquid chromatography, Fourier-transform NMR spectroscopy and mass spectrometry. (2 lecture, 3 lab hours). Prerequisite: Chem 469 or Graduate Standing. (3)

**513. PRINCIPLES OF ANALYTICAL CHEMISTRY.** A survey of the basic principles of analytical techniques and instrumentation. Prerequisite: Consent of Department Chairperson Required. (3)

**514. FUNDAMENTALS OF ELECTROCHEMISTRY.** Introduction to the theory and principles of electrochemistry, including modern electroanalytical techniques and microelectrodes. Prerequisite: Chem 469 or Graduate Standing. (3)

**519. CHEMICAL SEPARATIONS.** Theoretical and mathematical treatment of chromatography and other separation techniques. Prerequisite: Chem 469 or Graduate Standing. (3)

**524. PRINCIPLES OF ORGANIC CHEMISTRY.** A survey of the basic principles of organic chemistry with physical chemical principles. Prerequisite: Consent of Department Chairperson Required. (3)

**527. ADV. ORGANIC CHEM., STRUCTURE MECHANISM.** Resonance and molecular orbital theory, linear free energy relations, and reaction mechanisms. Prerequisite: Chem 331 or Graduate Standing. (3)

**528. ADV. ORGANIC CHEM., STRUCTURE SYNTHESIS.** Conformational analysis, carbanion chemistry, and synthetic reactions. Prerequisite: Chem 331 or Graduate Standing. (3)

**529. STEREOCHEMISTRY.** Configurational and conformational analysis of molecules; the steric course of organic chemical reactions. Prerequisite: Chem 331 or Graduate Standing. (3)

**530. ADVANCED ORGANIC SYNTHESIS.** A study of the literature, reactions, and planning methods that are used in modern organic synthesis. Prerequisite: Chem 331 or Graduate Standing. (3)

**531. ADVANCED PHYSICAL CHEM., QUANTUM CHEM.** Elementary quantum chemistry; solution of the Schrodinger equation for simple chemical systems; molecular orbital theory. Prerequisite: Chem 332 or Graduate Standing. (3)

**532. CHEMICAL THERMODYNAMICS.** Discussion of irreversible and equilibrium thermodynamics and application to various chemical problems. Prerequisite: Chem 332 or Graduate Standing. (3)

**534. PHYSICAL BIOCHEMISTRY.** Macromolecules: structure and function; thermodynamics and kinetics of conformational transitions and macromolecule-ligand interactions. Prerequisite: (Chem 471 and (Chem 331 or Chem 334) or Graduate Standing). (3)

**535. PRINCIPLES OF PHYSICAL CHEMISTRY I.** A survey of the principles of physical chemistry. Thermodynamics, kinetics, quantum mechanics, spectroscopy, statistical mechanics. Prerequisite: Consent of Department Chairperson Required. (3)

**536. ADVANCED PHYS. CHEM., REACTION DYNAMICS.** Kinetic theory; molecular reaction dynamics; transition state theory. Prerequisite: Chem 332 or Graduate Standing. (3)

**538. PRINCIPLES OF PHYSICAL CHEMISTRY II.** Continuation of a survey of the principles of physical chemistry. Thermodynamics, kinetics, quantum mechanics, spectroscopy and statistical mechanics. Prerequisite: Chem 535 with minimum grade of B, Consent of Department Chairperson Required. (3)

**544. CHEMICAL APPLICATIONS OF GROUP THEORY.** Introduction to the principles of symmetry and group theory and their application to the description of molecular structure in terms of the chemical bonding models (VB, MO, and LF) and spectral properties (magnetic, vibrational, and electronic). Prerequisite: Chem 401 or Graduate Standing. (3)

**545. CHEMICAL LITERATURE.** Introduction to and practice in the use of chemical abstracts, journals, and other library reference materials. Z grade. Prerequisite: Consent of Department Chairperson Required. (3)

**546. CHEM FOR HIGH SCHOOL SCIENCE TEACHER I.** A review of the basic principles of chemistry and an overview of the new technology, instructional materials, and methods used for teaching chemistry at the high-school level. Appropriate for high-school teachers seeking certificate renewal or supplemental endorsement. May not be counted toward a degree in the sciences. May be repeated once for credit. Prerequisite: Consent of Department Chairperson Required. (3)

**547. CHEM. FOR HIGH SCHOOL SCIENCE TEACHER II.** A review of the basic principles of chemistry and an overview of the new technology, instructional materials, and methods used for teaching chemistry at the high-school level. Appropriate for high-school teachers seeking certificate renewal or supplemental endorsement. May not be counted toward a degree in the sciences. May be repeated once for credit. Prerequisite: Consent of Department Chairperson Required. (3)

**548. WORKSHOP-MIDDLE SCHOOL SCIENCE TEACHERS.** Selection and application of instructional materials and methods for secondary school chemistry. May not be counted toward an advanced degree in any of the sciences. Prerequisite: Consent of Department Chairperson Required. (1-2)

**550. SAFETY IN THE CHEMICAL LABORATORY.** Assigned readings and demonstrations on the use and handling of hazardous chemicals and chemical apparatus. Z grade. Prerequisite: Consent of Department Chairperson Required. (3)

**563. APPLIED SPECTROSCOPY.** Application of theoretical principles to the interpretation of the various types of spectroscopy. (2 lecture, 3 lab hours). Prerequisite: (Chem 332 and Chem 469) or Graduate Standing. (3)

**580. MOLECULAR BIOCHEMISTRY I.** Examination of the organization and functional mechanisms of gene expression at the molecular level. Prerequisite: (Chem 222 and Chem 226) or Graduate Standing. (3)

**581. MOLECULAR BIOCHEMISTRY II.** Continuation of Chem 580. Prerequisite: (Chem 222 and Chem 226) or Graduate Standing. (3)

**600. INTRODUCTION TO GRADUATE RESEARCH.** An introduction to a variety of aspects related to the performance and presentation of research, with emphasis on scientific ethics. Z grade. (3)

**601. ADVANCED INORGANIC CHEMISTRY I.** Atomic and molecular structure, symmetry, acid-base chemistry, the crystalline solid state, coordination chemistry; including structure, bonding, electronic spectra and reactions; main group chemistry; organometallic chemistry; and bioinorganic chemistry. (3)

**602. ADVANCED INORGANIC CHEMISTRY II.** Continuation of Chem 601. (3)

**603. INORGANIC TECHNIQUES.** Atomic and molecular structure; chemical bonds; solvent systems; reactions of the elements and their compounds. (3)

**605. SEMINAR IN CHEMISTRY.** A discussion of the current literature in organic chemistry taken primarily from journal articles appearing in the previous year. May be repeated for credit. Z grade. (1)

**615. SELECTED TOPICS IN ANALYTICAL CHEMISTRY.** May be repeated once for credit if topics are different. Prerequisite: Consent of Department Chairperson Required. (3)

**617. RESEARCH METHODOLOGY IN CHEMISTRY I.** Modern techniques and methods of research in chemistry. May be repeated for credit. (6 lab hours). (3)

**618. RESEARCH METHODOLOGY IN CHEMISTRY II.** Modern techniques and methods of research in chemistry. May be repeated for credit. (6 lab hours). (3)

**622. ORGANIC TECHNIQUES.** Important research techniques in organic chemistry and preparation of selected materials in their use. (3)

**625. SELECTED TOPICS IN ORGANIC CHEMISTRY.** May be repeated once for credit if topics are different. Prerequisite: Consent of Department Chairperson Required. (3)

**633. SELECTED TOPICS IN PHYSICAL CHEMISTRY.** May be repeated once for credit if topics are different. Prerequisite: Consent of Department Chairperson Required. (3)

**641. SELECTED TOPICS IN INORGANIC CHEMISTRY.** May be repeated once for credit if the topics are different. Prerequisite: Consent of Department Chairperson Required. (3)

**650. AREA SEMINARS.** Student seminar presentation in one of the following areas: analytical chemistry, biochemistry, inorganic chemistry, organic chemistry, physical chemistry. (May be repeated for credit). (1)

**659. DOCTORAL SEMINAR.** Contributions to scientific knowledge by the doctoral candidate in chemistry; presentation required during student's terminal year. (1)

**661. QUANTUM CHEMISTRY.** Rigorous treatment of quantum theory applied to molecular systems; Hartree-Fock and density functional theory; molecular orbital theory. (3)

**662. THEORY OF MOLECULAR STRUCTURE.** Theoretical studies of rotational, vibrational, and electronic spectra; magnetic spectroscopy; molecular beam and laser scattering. Prerequisite: Chem 661 with minimum grade of C. (3)

**665. BIOINORGANIC CHEMISTRY.** The role of metal ions in biological processes; structure of metal ion complexes; mechanisms of enzyme-metal complex catalysis. (3)

**671. BIOCHEMISTRY I.** Chemistry of biological macromolecules, including proteins, carbohydrates, lipids, and nucleic acids. Special topics in ligand, kinetics, and noncovalent forces. An independent study project is required. (3)

**672. BIOCHEMICAL TECHNIQUES.** Specialized laboratory methodology currently used in biochemistry. (4)

**673. BIOCHEMISTRY II.** Intermediary metabolism, including catabolic and anabolic processes involving carbohydrates, lipids, proteins, and nucleic acids. An independent study project is required. Prerequisite: Chem 671 with minimum grade of C. (3)

**674. SELECTED TOPICS IN BIOCHEMISTRY.** May be repeated once for credit if topics are different. Prerequisite: Consent of Department Chairperson Required. (3)

**676. NUCLEIC ACID CHEMISTRY.** The structural and functional properties of nucleic acids will be examined from a chemical perspective and correlated to their biochemical significance. (3)

**677. PROTEIN STRUCTURE.** Discussion of forces involved in protein folding; common structural motifs; structure-function relationships; overview of experimental and computational methods used to determine protein structure and homologies. (3)

**697. THESIS.** No grade. (1-12)

**717. INTERNSHIP SEMINAR IN COLLEGE CHEMISTRY.** Preparation and delivery of lectures in chemistry for use in classroom work and laboratory experimentation. May be repeated for credit. Z grade. (3)

**796. DOCTORAL THESIS.** Preparation of a thesis of publishable quality on a topic approved by the student's advisory committee. The topic of the thesis may deal either with a critical review of some current topic in chemistry, a credible proposal on teaching the substance of chemistry at the college level, or the student's research. No grade. (1-6)

**797. DISSERTATION.** No grade. (1-18)

## **ECONOMICS — ECON**

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Associate Professor Jon R. Moen, chair • 374 Holman Hall <http://www.olemiss.edu/depts/economics/>

Overview: The Department of Economics offers the Master of Arts (M.A.) and the Doctor of Philosophy (Ph.D.) degrees in economics.

Preliminary Requirements: In addition to meeting Graduate School requirements, prospective students who have a 3.0 overall GPA and competitive scores on the general test of the Graduate Record Examination (GRE) may be admitted to full standing. A student who does not meet these requirements may be admitted to conditional status.

No specific foundation courses are required for admission to full standing. It is recommended that all students present credit in courses in economics, including Econ 202, 203, and 230 (or their equivalent), and 18 hours in related courses, including two semesters of undergraduate calculus.

### **M.A. in Economics**

Description: The M.A. in economics degree prepares students for doctoral studies in economics or business, for teaching positions at community colleges, or for careers as professional economists in business or government as researchers or policy analysts. The focal point of the program is the development of understanding of fundamental theories of micro- and macroeconomic behavior; development of necessary analytical skills for economic problem solving and empirical testing; and exposure to current economic research.

Course Requirements: The M.A. in economics requires 30 hours of graduate credit, including Econ 604 (or 629), 605, 606, and 609. A total of 9 hours in finance (Fin 634 and two 500-level courses) may be applied toward the M.A. degree. Alternately, 6 hours may be taken in mathematics, history, political science, computer science, MIS/POM, or marketing. A student may opt for a thesis, which constitutes 6 hours. A final comprehensive examination is required of all students during the last enrollment period.

### **Ph.D. in Economics**

Description: The Ph.D. in economics is designed for students of exceptional ability who wish to do advanced work in preparation for careers in university teaching and research, or as staff specialists in

business, government, or research organizations. The course of study is more expansive in scope and is of greater depth than the master's program, with programs individualized to fit each student's interest and background. Emphasis in the program is placed on the development of the student's capacity to analyze economic problems and to do original research.

**Course Requirements:** The requirements for the Ph.D. in economics are at least 54 graduate hours beyond the bachelor's degree or at least 30 approved graduate hours beyond the master's degree. Each student must meet the core requirements for the M.A. degree and present credit in Econ 614, 628, 629, 630, and 631. A student must take two fields, each of which will consist of at least 9 hours of course work. One field may be in an approved area outside economics. Economics fields include applied microeconomics, applied macroeconomics, and econometrics.

**Other Academic Requirements:** Each student must successfully complete a written examination in economic theory and econometric methods. This exam is administered during the spring semester of the student's second year in the program.

After the student has passed the comprehensive examination, a dissertation proposal must be successfully presented to and approved by a dissertation committee. After the dissertation is written, a final oral defense culminates the student's doctoral program at the university.

### **Economics-Econ**

**504. ECONOMIC ISSUES IN AMERICAN HISTORY.** Trends and issues in American economic history from the Colonial Period to the present. Prerequisite: Econ 202 with minimum grade of C, Econ 203 with minimum grade of C. (3)

**505. PUBLIC FINANCE.** Economics of taxation and government spending. Impact of government fiscal operations on employment, price levels, resource allocation, income distribution, and economic growth. Prerequisite: Econ 202 with minimum grade of C, Econ 203 with minimum grade of C, Junior Standing Required. (3)

**506. PUBLIC FINANCE ADMINISTRATION.** Federal budgeting practices and policies, intergovernmental fiscal relations, cost-benefit studies, economics of state and local governments. Prerequisite: Econ 505 with minimum grade of C.

**510. INTERNATIONAL TRADE & COMMERCIAL POLICY.** Reason for trade; analysis of U.S. exports and imports; balance of trade; commercial policy, foreign exchange, gold problems; changing trends. (Same as Law 542). Prerequisite: Econ 202 with minimum grade of C, Econ 203 with minimum grade of C. (3)

**513. HISTORY OF ECONOMIC THOUGHT.** Economic thought from Renaissance to the 20th century, with special emphasis on the development of economic doctrines since the 18th century. Prerequisite: Econ 203 with minimum grade of C. (3)

**520. SPECIAL TOPICS IN ECONOMICS.** Selected issues, problems, research techniques, materials, and policies; content varies. Prerequisite: Instructor Approval Required. (3)

**540. SEMINAR IN ECONOMICS.** Selected topics in economics; content varies. (May be repeated once for credit). Prerequisite: Instructor Approval Required, Junior Standing Required. (3)

**545. GAME THEORY AND STRATEGIC THINKING.** Basic principles of strategic thinking and game theory. Applications to strategic firm interaction, incentives, and bargaining are emphasized. Prerequisite: Econ 202 with minimum grade of C, C minimum in ( Math 261 or Math 267 or Math 271 ) or Graduate Standing. (3)

**581. COLLECTIVE BARGAINING.** An introductory course to the field of collective bargaining in the private and public sectors covering such topics as the history of unionism in America, the organizing process, the negotiating process, and administration of the collective bargaining agreement. Emphasis on

pragmatic problems confronted by employers, employees, and unions. (Same as Mgmt 581). Prerequisite: Mgmt 383, Senior or above standing required. (3)

**583. LABOR RELATIONS.** An advanced course analyzing the evolution and impact of labor law in the United States. The growth of unions, the Railway Labor Act, the Norris-LaGuardia Act, and Fair Employment Law are emphasized using the case approach. (Same as Mgmt 583). Prerequisite: Mgmt 581, Senior or above standing required. (3)

**601. INDUSTRIAL ORGANIZATION.** Theoretical and applied microeconomics to aid in understanding the operation and performance of markets; analysis of market structures and their effects on pricing practices; economic impact of antitrust laws and government regulation upon businesses. (3)

**602. MANAGERIAL ECONOMICS.** Economic principles applicable to the solution of selected problems facing business decision makers; emphasis upon demand theory and estimation, production theory and cost estimation, pricing decisions, and capital budgeting. (3)

**603. BUSINESS CONDITIONS ANALYSIS.** The macroeconomic environment in which business firms must operate and foundations of governmental policy; issues and evidence pertaining to the development and implementation of these policies, including the rate of economic growth, interpretation of economic trends, and forecasting business conditions. (3)

**604. STATISTICAL METHODS FOR BUS & ECONOMICS.** Statistical foundations and applications of nonparametric and multivariate analysis in business and economics. (Same as Bus 604). (3)

**605. MICROECONOMIC THEORY.** Development of theories of consumption, production, and market interdependence, which influence price, output, and resource allocation. Prerequisite: Econ 609. (3)

**606. MACROECONOMIC THEORY.** Determination of income and employment, analysis of theories of consumption, investment and money holdings in the light of classical, Keynesian and post-Keynesian macroeconomic theories. Prerequisite: Econ 609. (3)

**607. SEMINAR.** Guided individual research in current economic and business problems including research methodology. May be repeated for credit. (3)

**609. METHODS OF MATHEMATICAL ANALYSIS.** Mathematical techniques for use in business and economics, methodology for investigation of empirical problems arising in business and economics. (3)

**610. PUBLIC CHOICE.** The theory of nonmarket decision making in a representative democracy. Topics include voting rules, legislative processes, bureaucracy, public goods, and the growth of government. (3)

**612. OPERATIONS RESEARCH.** Quantitative techniques for decision making, Bayesian analysis, Markov process, game theory, inventory control, queuing theory, and mathematical programming. (Same as Bus 612). (3)

**614. ADVANCED MICROECONOMICS.** Multi-input, multi-output models, alternatives to the profit maximization objective, welfare theory. (Continuation of Econ 605). (3)

**615. PUBLIC FINANCE.** Expenditure, revenue, and debt operations at the various levels of government, fiscal theories and programs designed to achieve economic goals. (3)

**616. ECONOMIC DEVELOPMENT.** A survey of the economic theory of development. Topics covered will include early approaches to development theory, the neoclassical reaction, new planning models, research and infrastructure, urban and rural labor markets, population, trade, and the political context. (3)

**617. LABOR ECONOMICS.** Advanced study of wage and employment theory, discussion of theory and empiricism associated with labor supply and mobility. (3)

**619. MONETARY THEORY.** The ideal and practical role of money in the determination of economic activity. (3)

**620. PUBLIC POLICY ANALYSIS.** A doctoral seminar on the analysis of selected public policy issues. (3)

**621. THEORY OF INTERNATIONAL TRADE.** Theory of international trade, theories of comparative advantage, and effects of tariffs and other trade policies. Recent theories of trade in the presence of scale economics and/or imperfect competition. (3)

**623. INTERNATIONAL MACROECONOMICS.** Behavior of output and employment under fixed and flexible exchange rates. Static and dynamic models of the balance of payments, current account, and



exchange rate determination. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Econ 606 with minimum grade of C. (3)

**624. ECONOMICS OF HUMAN RESOURCES.** Labor force concepts and their measurements; labor force participation, problem groups, and employment trends (regional and national); analysis of the human capital investment decision; growth of human capital and its effect on the economy. (3)

**625. LABOR & MANPOWER POLICIES & PROBLEMS.** Advanced seminar on selected topics of current interest in labor and manpower; various techniques in analyzing particular types of problems in labor and manpower economics; special related research topics. (3)

**628. ADVANCED MACROECONOMIC ANALYSIS.** Recent developments and major issues in contemporary macroeconomic theory and empirical research. Topics include equilibrium analysis, inflation theory, dynamic analysis, and growth models. (3)

**629. STATISTICAL METHODS FOR ECONOMICS & FIN.** A coverage of statistical methods to prepare students for future study of econometrics. (3)

**630. ECONOMETRICS I.** Econometric methods, including estimation and testing of single equation models using classical least-squares, and maximum likelihood procedures. Problems related to single equation methods: serial correlation, heteroscedasticity, etc. Prerequisite: Econ 629. (3)

**631. ECONOMETRICS II.** Advanced econometric methods and applications, including time-series analysis, multivariate regression, and simultaneous equation estimation and related problems. Prerequisite: Econ 630. (3)

**643. MICROECONOMICS RESEARCH SEMINAR.** Seminar on selected topics in contemporary microeconomic research. May be repeated once for credit. (3)

**645. MACROECONOMICS RESEARCH SEMINAR.** Seminar on selected topics in contemporary macroeconomic research. May be repeated once for credit. (3)

**647. ECONOMETRICS RESEARCH SEMINAR.** Seminar on selected topics in contemporary econometric research. May be repeated once for credit. (3)

**650. RESEARCH COLLOQUIUM IN ECON & FINANCE.** Presentation and discussion of current research in economics and finance. May be repeated for credit. Z grade. (1)

**697. THESIS.** No grade. (1-12)

**797. DISSERTATION.** No grade. (1-18)

## **ENGLISH — ENGL**

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Professor Ivo Kamps, chair • 128 Bondurant

<http://www.olemiss.edu/depts/english/>

Overview: The Department of English offers a minor and a Bachelor of Arts (B.A.) in English. At the graduate level, the department offers a Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) in English, and a Master of Fine Arts (M.F.A.) in creative writing.

Preliminary Requirements: Admission is competitive and based upon undergraduate transcripts, GRE general test scores, recommendations, and a writing sample.

### **M.A. in English**

Description: The M.A. in English is a specialist degree preparing students for further study at the Ph.D. level or for teaching in postsecondary education as well as for literary interpretation and scholarly pursuits. Upon completion of the degree, graduates should be aware of the richness inherent in literature written in English and to have honed to a high level both interpretive thinking and oral and written competencies.

Course Requirements: Students must complete 26 hours of course work with a B average and also complete an additional 6 hours of thesis credit. Engl 600 is required during the first fall semester of enrollment in full standing. Students must take 6 hours of course work in English or American literature before 1800 and 6 hours of English or American literature after 1800. Up to 6 hours may be taken in related disciplines and/or directed reading. Graduate instructors teaching freshman composition are required to complete Engl 617 (Teaching College English).

Program in Renaissance and Early Modern Studies: Students may receive an M.A. with specialization in Renaissance and Early Modern studies by completing 6 hours of graduate course work in Renaissance and Early Modern studies and submitting a thesis on a Renaissance or Early Modern subject. Students are encouraged to take 3 hours in a related discipline such as history, religion, or art, provided the focus of the course is on the Renaissance or Early Modern period.

Thesis Defense: An oral defense is the final stage before the student is recommended for the degree.

### **M.F.A. in Creative Writing**

Description: An M.F.A. in creative writing prepares students who have decided to develop their particular literary skills to a higher level. By working closely with the well-published poets and writers in the Department of English, as well as with their fellow graduate students, the developing creative writers actively participate in a scholarly community that focuses on successfully learning the craft of writing. Upon completion of the degree, the successful student will have a completed manuscript ready for publication.

Course Requirements: Students with a B.A. must complete 36 hours of course work with at least a B average, as well as 6 additional hours of thesis credit. Of the 36 hours, a minimum of 12 must be in creative writing workshops; at least 12 must be in literature courses (6 before 1800 and 6 after); and 3 must be in literary, critical, cultural, rhetorical, or composition theory. Engl 600 is required during the first fall semester of enrollment in full standing. Students may take up to 9 hours in related disciplines and/or directed readings. Teaching assistants are required to take English 617: Teaching College English. Students with an M.A. or other graduate degree may be released from some course work.

The M.F.A. thesis is a book-length manuscript of either poetry or prose. Students are to work with a committee of three faculty members, one of whom will be the student's supervisor.

Before submitting the M.F.A. thesis, each student must pass a four-hour written test on topics on literature and related fields. The exam is set by the student's M.F.A. committee.

An oral defense before the committee, lasting approximately one hour, is the final stage before the student is recommended for the degree.

### **Ph.D. in English**

Description: The Ph.D. in English literature is a specialist degree that prepares students for teaching in postsecondary education as well as for literary interpretation and scholarly pursuits. Upon completion of the degree, graduates should be aware of the richness inherent in literature written in English and to have honed to a high level both interpretive thinking and oral and written competencies.

Course Requirements: The requirements for the Ph.D. in English include 24 hours of course work beyond the master's degree (additional courses may be required by the Graduate Admission Committee on an individual basis); 18 hours of dissertation; successful completion of an Advanced Candidacy Examination (comprehensive); an approved dissertation prospectus; and successful oral defense of a dissertation. The

course work must include Engl 600 during a student's first fall semester and Engl 601 during the first fall semester after defense of the prospectus. Course work must also include 6 hours in English or American literature before 1800; 6 hours in English or American literature after 1800; 3 hours of literary, critical, cultural, rhetorical, or composition theory; and up to 6 hours of graduate course work in related disciplines and/or independent study. All course work must be completed before a student may submit any section of the Advanced Candidacy Examination. Graduate instructors teaching in the composition program are required to complete Engl 617 (Teaching College English).

Students may receive a Ph.D. with specialization in Renaissance and Early Modern studies by completing 21 hours of graduate course work in Renaissance and Early Modern studies, including a minimum of 9 hours in the Department of English and a minimum of 9 hours outside the department, and submitting a dissertation on a Renaissance or Early Modern subject. With the exception of the 6-hour requirement in literature after 1800 and the 6-hour limit on graduate course work in related disciplines, students pursuing this specialization must also satisfy all other general requirements for the Ph.D. in English.

Advanced Candidacy: Admission to advanced candidacy follows the successful completion of the Advanced Candidacy Examination, which is both a written and oral examination. See the Department of English website for further detail: <http://www.olemiss.edu/depts/english/index.html>

Dissertation Prospectus: Soon after admission to advanced candidacy, the candidate is expected to submit a dissertation prospectus to the Ph.D. committee and an outside (extradepartmental) examiner.

Dissertation: The candidate is required to complete a book-length research project that makes an original and significant contribution to the field of literary studies. Candidates must successfully defend their dissertation before the Ph.D. committee and the outside examiner.

Ph.D. Committee: Each student, working in collaboration with the director of graduate studies, puts together a Ph.D. committee, composed of three members of the Department of English graduate faculty. The student and his or her Ph.D. committee design an individual program of study. The responsibilities of the Ph.D. committee include supervising foreign language study; setting, administering, and evaluating the Advanced Candidacy Examination process; evaluating the dissertation prospectus; supervising and approving dissertation work; conducting and evaluating the oral dissertation defense; and recommending the conferral of the degree. A fourth (extradepartmental) examiner works with the committee to evaluate the candidate's work from the prospectus stage forward.

Foreign Languages: Although there is no foreign language requirement for the Ph.D. per se, the members of the dissertation committee may, depending on the student's dissertation topic, require that the student demonstrate competence in one or more foreign languages.

### **English-Engl**

**501. DESCRIPTIVE GRAMMAR.** A structural examination of English grammar, with special attention to usage on different levels, formal and informal, standard and nonstandard, written and spoken; emphasis on phonology, morphology, and descriptive theories of grammar. (Same as Ling 501). Prerequisite: 1 of the following courses: ENGL 221, 222, 223, 224, 225, or 226. (3)

**502. HISTORICAL LINGUISTICS.** Study of words, speech languages, and language changes from the point of view of evolution in the course of time, particularly in Indo-European languages. (Same as Ling 502). Prerequisite: Engl 313 or Graduate Standing. (3)

**503. OLD ENGLISH I.** An introduction to the Old English language -- phonology, morphology, syntax, and vocabulary -- and to Old English literature, with special attention to translating prose. Prerequisite: 1 of the following courses: ENGL 221, 222, 223, 224, 225, or 226. (3)

**504. OLD ENGLISH II.** A study of Beowulf; historical context, manuscript, translation, and interpretation. Prerequisite: 1 of the following courses: ENGL 221, 222, 223, 224, 225, or 226. (3)

**505. HISTORY OF THE ENGLISH LANGUAGE II.** Advanced study of the history of the English language. (Same as Ling 505). Prerequisite: Engl 431 or Graduate Standing. (3)

**506. SEMANTICS.** Study of word meaning in human languages, especially English, history, issues, and theories of semantics. (Same as Ling 335). Prerequisite: Engl 401 or Engl 501 or Engl 592 or Engl 401 or Engl 501 or Engl 592 or 1 of the following courses: ENGL 221, 222, 223, 224, 225, or 226. (3)

**507. TEACHING ENGLISH GRAMMAR.** Methods for teaching grammar to secondary school students. Will not count for credit for M.A., M.F.A., or Ph.D. in English. (3)

**520. TEACHING WRITING FOR THINKING.** This course examines current theories and practices of teaching writing. The course focuses on the process theory of writing to foster thinking and learning in subject areas, collaborative learning, and error analysis and grammar instruction. Prerequisite: 1 of the following courses: ENGL 221, 222, 223, 224, 225, or 226. (3)

**521. NON FICTION WRITING.** Direction of individual writing projects. May be repeated once for credit. Prerequisite: Instructor Approval Required, 1 of the following courses: ENGL 221, 222, 223, 224, 225, or 226. (3)

**535. FICTION WORKSHOP.** Advanced workshop intended for graduate students. Prerequisite: Engl 424, 1 of the following courses: ENGL 221, 222, 223, 224, 225, or 226. (3)

**536. POETRY SEMINAR.** Advanced workshop intended for graduate students. Prerequisite: Instructor Approval Required, 1 of the following courses: ENGL 221, 222, 223, 224, 225, or 226. (3)

**566. FAULKNER STUDIES.** A study of the relationship between Faulkner's novels and the geography, history, and people of North Mississippi. Prerequisite: 1 of the following courses: ENGL 221, 222, 223, 224, 225, or 226. (3)

**580. WORLD ENGLISHES.** This course will investigate the spread and development of English throughout the world. (Same as Ling 580). (3)

**588. WRITING THEORY.** This course examines theories of rhetoric and composing as they conflict and converge to form our prevailing theories of writing. Following a brief survey of rhetorical theory, ancient to modern, the course focuses on contemporary theories of composing written discourse. Prerequisite: 1 of the following courses: ENGL 221, 222, 223, 224, 225, or 226. (3)

**592. MODERN ENGLISH GRAMMAR.** Advanced treatment of syntactic structures, with special attention to current interpretations; emphasis on morphology and generative transformational theories of syntax. (Same as Ling 592). Prerequisite: 1 of the following courses: ENGL 221, 222, 223, 224, 225, or 226. (3)

**595. SEMINAR IN LINGUISTICS.** Content varies. Prerequisite: 1 of the following courses: ENGL 221, 222, 223, 224, 225, or 226. (3)

**598. TOPICS FOR ENGLISH TEACHERS.** Intensive study of a special topic in English designed for secondary school teachers. Emphasis on research and writing, pedagogy and classroom resources. May not be applied toward the M.A., M.F.A., or Ph.D. in English. May be repeated once for credit. (3)

**599. SPECIAL TOPICS IN ENGLISH.** Content varies. May be repeated once for credit. Prerequisite: 1 of the following courses: ENGL 221, 222, 223, 224, 225, or 226. (3)

**600. INTRO TO GRADUATE STUDY.** Introduction to theory and methods for graduate study, with emphasis on the impact of theoretical schools of thought on the evolution of the profession. Z grade. Prerequisite: Consent of Department Chairperson Required, Restricted to English or Southern Studies Majors. (3)

**601. PROFESSIONAL ISSUES IN GRADUATE STUDY.** History, politics, and economics of the profession of literary studies; current trends in academic professionalism. Z grade. Prerequisite: Instructor Approval Required, Restricted to English or Southern Studies Majors. (1)

**603. STUDIES IN EARLY ENGLISH LITERATURE.** Prerequisite: Restricted to English or Southern Studies Majors. (3)

**605. MIDDLE ENGLISH.** The Middle English language, with some attention to the development of modern English; the reading of representative writers other than Chaucer. Prerequisite: Restricted to English or Southern Studies Majors. (3)

**606. CHAUCER.** Chaucer's major works. Prerequisite: Restricted to English or Southern Studies Majors. (3)

**607. STUDIES IN MIDDLE ENGLISH LITERATURE.** Prerequisite: Restricted to English or Southern Studies Majors. (3)

**608. BIBLIOGRAPHICAL TOOLS AND METHODS.** Prerequisite: Restricted to English or Southern Studies Majors. (3)

**609. STUDIES IN 16TH CENTURY LITERATURE.** Restricted to poetry or to prose. Prerequisite: Restricted to English or Southern Studies Majors. (3)

**611. STUDIES IN SHAKESPEARE.** Prerequisite: Restricted to English or Southern Studies Majors. (3)

**613. STUDIES IN ENGLISH DRAMA.** Prerequisite: Restricted to English or Southern Studies Majors. (3)

**615. FUNDAMENTALS OF LINGUISTIC SCIENCE.** Analysis of methods of describing any given language and of reconstructing its history, with outside papers emphasizing students' own linguistic interests. Prerequisite: Restricted to English or Southern Studies Majors. (3)

**617. TEACHING COLLEGE ENGLISH.** Introductory course in writing theory, teaching practices, and research in composing. Prerequisite: Restricted to English or Southern Studies Majors. (3)

**619. STUDIES IN AFRICAN AND AFRICAN DIASPORIC.** This course will focus on how contemporary critical theory can aid our understanding of major developments in African literature. Prerequisite: Restricted to English or Southern Studies Majors. (0-3)

**620. POSTCOLONIAL LIT, CULTURE, AND CRITICISM** Prerequisite: Restricted to English or Southern Studies Majors. (0-3)

**625. MODERN AMERICAN DRAMA.** American drama of the 20th century. Prerequisite: Restricted to English or Southern Studies Majors. (3)

**631. MILTON.** Milton's writings, with special attention to his poetry, his life, and his times. Prerequisite: Restricted to English or Southern Studies Majors. (3)

**633. 17TH CENTURY STUDIES.** Prerequisite: Restricted to English or Southern Studies Majors. Restricted to English or Southern Studies Majors. (3)

**640. BRITISH LIT OF RESTORATION 18TH CENTURY.** Emphasis on the principal writings of England, 1600-1800. Prerequisite: Restricted to English or Southern Studies Majors. (3)

**641. 18TH CENTURY STUDIES.** Prerequisite: Restricted to English or Southern Studies Majors. (3)

**643. THE ENGLISH LYRIC.** Prerequisite: Restricted to English or Southern Studies Majors. (3)

**645. STUDIES IN THE ENGLISH NOVEL.** Prerequisite: Restricted to English or Southern Studies Majors. (3)

**653. THE STUDY OF FILM.** A seminar on various approaches to the study of film and film research. A research paper is required, as well as attendance at weekly film showings, related lectures, and seminar meetings. Prerequisite: Restricted to English or Southern Studies Majors. (3)

**654. SPECIAL TOPICS IN FILM STUDY.** Content varies. Prerequisite: Restricted to English or Southern Studies Majors. (3)

**655. STUDIES IN THE ROMANTIC PERIOD.** Prerequisite: Restricted to English or Southern Studies Majors. (3)

**657. STUDIES IN THE VICTORIAN PERIOD.** Prerequisite: Restricted to English or Southern Studies Majors. (3)

**658. STUDIES IN MODERN BRITISH LITERATURE.** Prerequisite: Restricted to English or Southern Studies Majors. (3)

**659. STUDIES IN CONTEMPORARY LITERATURE.** Selected literature of the post-war period. Prerequisite: Restricted to English or Southern Studies Majors. (3)

- 661. FAULKNER.** A critical analysis of selected novels and short stories. Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 663. STUDIES IN MAJOR AMERICAN WRITERS.** Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 665. STUDIES IN COMPOSITION AND RHETORIC.** Content varies. May be repeated once for credit. Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 666. RESEARCH IN COMPOSITION.** An examination of the research being done in the field of composition. Students will design and implement research projects. Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 667. STUDIES IN THE AMERICAN NOVEL.** Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 669. STUDIES IN 19TH CENTURY AMERICAN LIT.** Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 670. STUDIES IN MODERN AMERICAN LIT.** Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 675. STUDIES IN AMERICAN LITERARY REGIONALISM.** Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 676. STUDIES IN SOUTHERN LITERATURE.** This is an advanced graduate seminar that investigates special topics in Southern literature; content varies and may be repeated once for credit. Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 678. SCREENWRITING.** Intensive screenwriting seminar. Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 679. FORM, CRAFT, INFLUENCE FOR POETS.** A graduate literature course for writers of poetry, emphasizing style and technique. Content varies; may be repeated once for credit. Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 680. GRADUATE FICTION SEMINAR I.** Intensive fiction seminar. Content varies and may be repeated three times for credit. Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 681. GRADUATE FICTION SEMINAR II.** Intensive fiction seminar. Content varies and may be repeated three times for credit. Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 682. GRADUATE POETRY SEMINAR.** Intensive graduate poetry seminar focusing primarily on the production of original poetry but also training students in reading, critique, performance, and how to submit work for publication. Content varies and may be repeated three times for credit. Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 683. FORM, CRAFT, AND INFLUENCE: FICTION.** A graduate literature course for fiction writers, emphasizing style and technique. Content varies; may be repeated one time for credit. Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 684. DIRECTED READING IN CREATIVE WRITING.** Consent of instructor required. Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 685. THEORY AND CRITICISM OF POETRY.** Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 686. STUDIES IN GENRE.** Special topics in the literary discourses of genre. Content varies and may be repeated for credit. Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 687. STUDIES IN LITERATURE & THE ENVIRONMENT.** A seminar on environmental poetry, fiction, and/or nonfiction; nature writing; and/or ecocriticism and ecocriticism. Repeatable for credit. Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 688. STUDIES IN COMPOSITION AND RHETORIC.** Content varies. May be repeated for credit. Prerequisite: Restricted to English or Southern Studies Majors. . (3)
- 689. STUDIES IN GENRE II.** Special topics in the literary discourses of genre. Content varies and may be repeated for credit. Prerequisite: Restricted to English or Southern Studies Majors. (3)

- 690. THE MODERNIST COLLOQUIUM.** A faculty-graduate student colloquium focusing on aspects of Modernism: the range of literature and thought from the romantic period in Europe and the United States to the present. Students admitted by permission of instructor based upon presentation of an acceptable prospectus and evidence of experience and knowledge in the field. May be repeated once for credit. Z grade. Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 691. STUDIES IN CRITICAL THEORY.** Content varies. May be repeated for credit. Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 692. CULTURAL STUDIES.** The critical concept of literature as a reflection of culture. Content varies. Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 693. DIRECTED READING IN ENGLISH LITERATURE.** Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 694. STUDIES IN GENDER THEORY.** Content varies. May be repeated for credit. Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 695. DIRECTED READING IN AMERICAN LITERATURE.** Prerequisite: Restricted to English or Southern Studies Majors. (3)
- 696. DIRECTED RESEARCH.** Individual directed research in literature, language, and criticism. Credit not applicable to graduate degree programs in English. May be repeated. Z grade. Prerequisite: Restricted to English or Southern Studies Majors. (1-6)
- 697. THESIS.** No grade. (1-12)
- 698. MFA THESIS HOURS: INDEP STUDY & WRITING.** No grade. (1-12)
- 717. INTERNSHIP SEMINAR IN COLLEGE ENGLISH.** Z grade. (3)
- 796. DOCTORAL ESSAY.** No grade. (3)
- 797. DISSERTATION.** No grade. (1-18)

**FRENCH** See Modern Languages.

### **Graduate Certificate in Gender Studies**

Description: The Graduate Certificate in Gender Studies indicates that the bearer has an area of concentration and specialization in gender studies with an interdisciplinary focus. The director of the Sarah Isom Center for Women and Gender Studies will administer the certificate and work with graduate students to identify appropriate courses and independent study opportunities.

Minimum Total Credit Hours for Certificate: 12 hours of graduate course work

Mission Statement: The goals of the certificate are to train students to teach interdisciplinary courses in gender studies and to certify to potential employers that they have such training; to bring graduate students from different disciplines together to study gender issues, encouraging conversation across disciplines and enlarging a community of students and faculty with shared interests; and to encourage interdisciplinary scholarship.

Certificate Requirements: Only students already accepted for graduate study at the University of Mississippi by their home departments are eligible for the Gender Studies Graduate Certificate Program.

Graduate students will receive a Certificate in Gender Studies when they complete a minimum of 12 hours in classes dealing with gender and/or women's issues. A student must take at least 6 of these hours outside of his or her department. No more than 3 of these hours can be Directed Readings, and students cannot apply thesis or dissertation hours. Students must maintain at least a "B" average in all courses counted toward the certificate. The time limit for completing a certificate is four years.

Classes that fulfill this requirement include Soc 525, Psy 561, His 660, His 690, Engl 694, and Span 565. Other graduate classes may count towards the certificate with the approval of the director of the Sarah Isom Center for Women and Gender Studies and the Sarah Isom Center's Teaching and Curriculum Committee.

**GEOLOGY** See Geological Engineering, School of Engineering.

**GERMAN** See Modern Languages.

## **HISTORY — HIST**

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Associate Professor Joseph P. Ward, chair • 310 Bishop Hall

<http://www.olemiss.edu/depts/history/>

Overview: The Department of History offers a minor, Bachelor of Arts (B.A.), Master of Arts (M.A.), and Doctor of Philosophy (Ph.D.) in history.

### **M.A. in History**

Description: The M.A. in history is offered as either a thesis or non-thesis option. Students in the M.A. program may study a variety of topics and chronological sweeps of American and European history, as well as much of the histories of Africa, Latin America, and East Asia.

Preliminary Requirements: In addition to meeting Graduate School requirements, prospective students will normally be expected to have an undergraduate major in history and should show evidence of a strong undergraduate record overall. The department's graduate committee will decide on admission upon evaluation of the applicant's undergraduate and other academic records, faculty recommendations, aptitude scores of the Graduate Record Examination, a short written statement of purpose, and a writing sample.

Course Requirements: The thesis option requires 24 hours of graduate-level course work in history and 6 hours of thesis work. The non-thesis option requires 36 hours of course work.

Students should pursue a rationally structured course program, to be designed on an individual basis in close consultation with the Graduate Advisory Committee. As part of this program, students must take the Historical Methods course (His 550), at least three other 500-level courses, and at least one 700-level research seminar. Students may, with the prior approval of the Graduate Advisory Committee, take up to 12 hours of graduate credit (500 level or above) outside the Department of History.

Examinations: Non-thesis option students must pass an oral examination to be administered by a three-member ad hoc examination committee. This committee will be constituted and convened for the examination upon consultation between the student and the graduate committee. Students opting for a thesis should by the end of their second semester have selected a faculty member in the department who is willing to direct their thesis. The thesis director in consultation with the student and the graduate committee will select two additional faculty members willing to serve as readers and members of a thesis committee. The thesis director will be the student's primary adviser and liaison with the graduate committee, and together with the other two members of the thesis committee conduct and pass judgment on the final oral examination as well as evaluate the thesis.

Other Academic Requirements: Students who choose the thesis option may be required by the thesis director to demonstrate proficiency in a foreign language and/or a quantitative technique.

### **Ph.D. in History**



Description: Students in the doctoral program may focus primarily on the histories of America, Europe, and modern Latin America, with secondary areas in any of these areas as well as aspects of the histories of Africa and East Asia.

Preliminary Requirements: In addition to the Graduate School requirements for the Ph.D., admission is limited to those whose scholastic record shows distinct promise of success in graduate study. The M.A. in history or its equivalent is required. At the discretion of the graduate committee, students who have obtained the M.A. in history from The University of Mississippi may be admitted to the Ph.D. program. Holders of an M.A. degree from other institutions must submit the same application materials as described for admission to the M.A. program in history for The University of Mississippi.

Course Requirements: In addition to the Graduate School requirements for the Ph.D., the doctoral program in history includes the following specific requirements and regulations:

Foreign Language Requirement: Students must meet a minimum requirement of proficiency in one foreign language. The requirement may be met by either of the following methods:

1. Attainment of a passing grade of B or better in a fourth-semester (202-level) language course taught at The University of Mississippi. An equivalent course that has been completed within three calendar years prior to enrollment in the graduate program will satisfy this requirement.
2. Attainment of a passing grade on a departmentally administered translation exam or certification from another history department that the student has passed an equivalent translation exam within three calendar years prior to enrollment in the graduate program.

In certain fields a second language may be required. Students whose native language is not English are excused from the foreign language requirement.

Course Work: Ph.D. students should pursue a rationally structured course program, to be designed on an individual basis in close consultation with the Graduate Advisory Committee. In addition to Graduate School requirements, the following departmental course requirements must be met. Students who have not previously taken a graduate-level bibliography/methods course must take His 550 as soon as it is offered. Before they may petition to take the comprehensive examination, all Ph.D. students must take at least one 700-level research seminar, at least 12 hours of graduate course work in their major field, and at least 6 hours in each of the minor fields. Students are strongly urged to take more than the prescribed minimum of course work. Upon consultation with the Graduate Advisory Committee, students may take up to 12 hours of graduate-level courses related to one or more of their fields outside the department. Up to 12 hours of such outside course work may be taken in one discipline to constitute a minor field outside the department.

Comprehensive Examinations: Ph.D. students are required to take written examinations in each of their two minor fields and a combined written and oral examination in their major field. The written and oral examinations for the minor fields and the major field are to be prepared, conducted, and evaluated by a committee of at least two faculty members in each case. The examination committees are appointed by the department chair in consultation with the student, the dissertation director, and the Graduate Advisory Committee. If one of the minor fields is outside the department, the examination committee in that field is to be composed of two faculty members from the outside department(s) and one faculty member from the Department of History. A student who fails a comprehensive examination is allowed to retake the examination one time. Comprehensive examinations will be offered two or three times per year at designated times. These times will be publicized and made available to all graduate students and faculty.

Ph.D. Dissertation: Ph.D. students should select a faculty member in the department who is willing to direct a dissertation in their major field no later than the end of their third semester. The dissertation director in consultation with the student and the Graduate Advisory Committee will select two additional faculty members within the department and one faculty member from another department willing to serve as readers and members of a dissertation committee. The dissertation director will be the student's primary adviser and liaison with the Graduate Advisory Committee, and together with the other two members of the dissertation committee pass judgment on the dissertation.

Final Oral Examination: The final oral examination is directed primarily to the defense of the dissertation.

Other Academic Requirements: Each graduate student should select an adviser in the intended research area (or area of specialization), who is willing to act in that capacity, not later than the end of the second semester in the program. That adviser will consult with the student on the student's schedule. Students also shall be advised and have their schedules approved by the department's Graduate Advisory Committee.

### **History-His**

**505. HISTORIOGRAPHY: US THROUGH RECONSTRUCTION.** An examination of the major issues, sources, theories, and interpretations from the exploration and settlement (or invasion) of North America by Europeans through the Reconstruction period in U.S. history. Prerequisite: History Majors, History Graduate Students only with permission of the Graduate Adviser. (3)

**506. HISTORIOGRAPHY: US SINCE RECONSTRUCTION.** An examination of the major issues, sources, theories, and interpretations from the Civil War to the present. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**509. HISTORIOGRAPHY: AFRICAN AMERICAN HISTORY.** An introduction to the research methodology and principles of historiography as applied to specific events and issues in African American history. The course will focus on how African American history has been, and is being, written. Topics include the major historians, philosophies of history, types and uses of evidence and fields in investigation. May not be used to complete history department M.A. 500-level historiography requirements. (Same as AAS 509). Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**550. HISTORICAL METHODS & PHILOSOPHY OF HIST.** An introduction to advanced historical research tools and methods, and an examination of the different varieties of historical interpretation. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**551. HISTORIOGRAPHY: EUROPE TO 1815.** An examination of the major issues, sources, theories, and interpretations from late antiquity through the French Revolution. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**552. HISTORIOGRAPHY: EUROPE SINCE 1789.** An examination of the major issues, sources, theories, and interpretations from the French Revolution to the present. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**605. READINGS: US THROUGH RECONSTRUCTION.** Selected periods and topics. May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**606. READINGS: US CIVIL WAR TO PRESENT.** Selected periods and topics. May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**607. READINGS: SOUTHERN US HISTORY.** Selected periods and topics. May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**611. READINGS: ERA OF THE US CIVIL WAR.** Examination of the major topics in U.S. history, 1850-1877. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**612. READINGS: US DEPRESSION & WAR.** Examination of major topics in U.S. history, 1917-1945. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**613. READINGS: CONTEMPORARY US HISTORY.** Examination of major topics in U.S. history after 1945. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**651. READINGS: EUROPEAN HISTORY TO 1815.** Selected periods and topics. May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**652. READINGS: EUROPEAN HISTORY SINCE 1789.** Selected periods and topics. May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**653. READINGS: RUSSIAN HISTORY.** Selected periods and topics. May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**660. READINGS: GENDER HISTORY OF MOD. EUROPE.** Topics in the gender history of modern Europe and its colonial empires. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**661. READINGS: EUROPE & THE ATLANTIC WORL.** Topics in the history of European expansion into the Atlantic basin. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**662. READINGS: HISTORY OF STALINISM.** Examines the evolution of the Soviet experiment. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**663. READINGS: HISTORY OF MODERN CONSUMERISM.** Examines the changing nature of consumerism in 19th and 20th century Europe and United States. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**664. READINGS: 20TH CENTURY ECON & SOCIAL POL.** Examines major themes of global social and economic policy. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**670. READINGS: SLAVERY IN AFRICA.** Examines slavery in Africa and the movement of enslaved Africans overseas. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**671. READINGS: COLONIALISM IN AFRICA.** Examines European colonialism in 19th and 20th century Africa. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**681. READINGS: BRITISH HISTORY TO 1815.** Selected periods and topics. May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**682. READINGS: BRITISH HISTORY SINCE 1815.** Selected periods and topics. May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**685. READINGS: MIDDLE EAST HISTORY.** Selected periods and topics in the history of the Middle East. May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**686. READINGS: COLONIAL LATIN AMER. HISTORY.** Examination of the historical writing on the colonial period of Latin American history. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**687. READINGS: SOCIAL MOVEMENTS. MOD LAT AM.** Topics in the history of political and social movements of 19th and 20th century Latin America. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**688. READINGS: RACE AND ETHNICITY IN LATIN AM.** Topics in the history of racial and ethnic identity in Latin America. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**689. READINGS: SECULARIZ/SACRALIZ IN LATIN AM.** Topics in the religious history of Latin America. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**690. READINGS: GENDER & POWER IN LATIN AM.** Topics in the history of gender identity in Latin America. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**691. READINGS: MODERN LATIN AM HISTORY.** Selected periods and topics since 1825. May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**692. READINGS: AFRICAN HISTORY.** Selected periods and topics. May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**693. READINGS: GENERAL US HISTORY.** Selected periods and topics. May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**694. READINGS: GENERAL EUROPEAN HISTORY.** Selected periods and topics. May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**695. READINGS: CHINESE HISTORY.** Topics in the history of late imperial and modern China. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**696. READINGS: SELECTED AREAS.** . Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**697. THESIS.** No grade. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (1-12)

**698. SPECIAL TOPICS.** Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**701. RESEARCH: US THROUGH THE CIVIL WAR.** May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**702. RESEARCH: US FROM CIVIL WAR TO PRESENT.** May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**751. RESEARCH: EUROPEAN HISTORY TO 1815.** May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**752. RESEARCH: EUROPEAN HISTORY SINCE 1789.** May be repeated once for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**781. RESEARCH: BRITISH HISTORY TO 1815.** May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**782. RESEARCH: BRITISH HISTORY SINCE 1815.** May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**791. RESEARCH: MODERN LATIN AMERICAN HISTORY.** May be repeated for credit. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (3)

**797. DISSERTATION.** No grade. Prerequisite: History Graduate Students only with permission of the Graduate Adviser. (1-18)

## **MATHEMATICS — MATH**

Professor Iwo Labuda, chair • 305 Hume Hall

<http://www.olemiss.edu/depts/mathematics/>

Overview: The Department of Mathematics offers a Bachelor of Arts (B.A.), Bachelor of Science (B.S.), and minor in mathematics. At the graduate level, the department offers the Master of Arts (M.A.), Master of Science (M.S.), and Doctor of Philosophy (Ph.D.) in mathematics.

Preliminary Requirements: The full four-semester sequence of calculus is prerequisite to all graduate courses. Prerequisite to a graduate program in mathematics is a background preparation in mathematics equivalent to the undergraduate major in the College of Liberal Arts; that is, courses through calculus, supplemented by at least 18 hours in mathematics at a higher level that are to include the advanced calculus sequence.

Additional Information: Students are generally required to participate in the teaching of mathematics lectures as part of their graduate training. The department offers fellowships, assistantships, and other financial awards to assist graduate students in their studies.

### **M.A. in Mathematics**

Description: The M.A. in mathematics is designed (1) to prepare students for the teaching of mathematics, particularly in high schools and community colleges, (2) to prepare students for nonteaching professions or vocations, such as civil service, actuarial work, or statistical work, in which mathematics plays a principal part, or (3) for students who wish to supplement study in other fields with suitable courses in mathematics.

Course Requirements: A candidate for the M.A. degree must complete 30 graduate hours, including the first course from five of the following seven sequences: Topology (Math 501, 502); Modern Algebra (Math 525, 526); Applied Probability (Math 573, 574); Statistics (Math 575, 576); Theory of Functions of Real Variables (Math 653, 654); Theory of Functions of Complex Variables (Math 655, 656); and Graph Theory (Math 681, 682). The M.A. candidate must complete the second course in two of these sequences. The candidate may satisfy the 30-semester-hour requirement in one of three ways: 1) 30 hours of graduate mathematics; 2) 24 hours of graduate mathematics and an approved 6-hour minor; or 3) 24 hours of graduate mathematics and an approved master's thesis.

### **M.S. in Mathematics**

Description: The M.S. in mathematics is designed primarily for students who are attracted to mathematics as a major scholarly pursuit, including students who plan eventually to work toward the doctorate in this field. The M.S. degree also prepares students who are looking for professional careers in mathematics, either as teachers or as research mathematicians.

Course Requirements: A candidate for the M.S. degree must complete 30 graduate hours, including at least two of the following three sequences: Modern Algebra (Math 525, 526); Theory of Functions of Real Variables (Math 653, 654); and Theory of Functions of Complex Variables (Math 655, 656). The candidate may satisfy the 30-semester-hour requirement in one of three ways: 1) 30 hours of graduate mathematics; 2) 24 hours of graduate mathematics and an approved 6-hour minor; or 3) 24 hours of graduate mathematics and an approved master's thesis.

### **Ph.D. in Mathematics**

Description: The Ph.D. in mathematics requires mastery of a broad area of mathematics and completion of a dissertation that is an original and substantial contribution. This terminal degree prepares a student for a professional career in mathematics, as a teacher or a research mathematician.

Course Requirements: A student must complete a minimum of 48 course hours of graduate work, exclusive of the dissertation (18 hours). This must include the sequences Modern Algebra (Math 525, 526); Theory of Functions of Real Variables (Math 653, 654); and Theory of Functions of Complex Variables (Math 655, 656). Of the 48 course hours, 36 must be in courses open only to graduate students. Reading knowledge of one foreign language is required; French, Russian, or German is recommended. This requirement may be satisfied by the completion of 6 hours of an undergraduate language at the sophomore level or by making an appropriate score on the Graduate School Foreign Language Test of the Educational Testing Service.

Other Academic Requirements: An advisory committee consisting of five members of the graduate faculty will be appointed for each graduate student who declares his or her intention to become a candidate for the degree. Written exams will be administered covering the required sequences and one other approved sequence. In addition, the candidate must satisfy the advisory committee as to the extent of the candidate's research ability and activity, as well as the suitability and excellence of course work presented.

## Mathematics-Math

- 501. GENERAL TOPOLOGY I.** Metric spaces; Baire's theorem; topological spaces; continuity; separation axioms; connectedness; compactness; and quotient and product topologies. Prerequisite: Math 305 with minimum grade of C. (3)
- 502. GENERAL TOPOLOGY II.** Algebraic invariants in topology. Prerequisite: Math 501 with minimum grade of C. (3)
- 513. THEORY OF NUMBERS I.** Divisibility; properties of prime numbers; congruences and modular arithmetic; quadratic reciprocity; and representation of integers as sums of squares. Prerequisite: Math 305. (3)
- 514. THEORY OF NUMBERS II.** Arithmetic functions and their distribution; distribution of prime numbers; Dirichlet characters and primes in arithmetic progression; and partitions. Prerequisite: Math 513, Math 555. (3)
- 519. MATRICES.** Basic matrix theory, eigenvalues, eigenvectors, normal and Hermitian matrices, similarity, Sylvester's Law of Inertia, normal forms, functions of matrices. Prerequisite: Math 319 with minimum grade of C. (3)
- 520. LINEAR ALGEBRA.** An introduction to vector spaces and linear transformations; eigenvalues, and the spectral theorem. (3)
- 525. INTRODUCTION TO ABSTRACT ALGEBRA I.** General theory of groups. Prerequisite: Math 305 with minimum grade of C. (3)
- 526. INTRODUCTION TO ABSTRACT ALGEBRA II.** General theory of rings and fields. Prerequisite: Math 525 with minimum grade of C. (3)
- 533. TOPICS IN EUCLIDEAN GEOMETRY.** A study of incidence geometry; distance and congruence; separation; angular measure, congruences between triangles; inequalities; parallel postulate; similarities between triangles; circles area. Prerequisite: Math 305 with minimum grade of C. (3)
- 537. NON-EUCLIDEAN GEOMETRY.** Brief review of the foundation of Euclidean plane geometry with special emphasis given the Fifth Postulate; hyperbolic plane geometry; elliptic plane geometry. (3)
- 540. HISTORY OF MATHEMATICS.** Development of mathematics, especially algebra, geometry, and analysis; lives and works of Euclid, Pythagoras, Cardan, Descartes, Newton, Euler, and Gauss. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Math 305 with minimum grade of C. (3)
- 545. TOPICS FOR SECONDARY SCHOOL TEACHERS.** High-school subjects from an advanced point of view and their relation to the more advanced subjects. May be repeated once for credit. (3)
- 555. ADVANCED CALCULUS I.** Suprema and infima on the real line; limits, liminf, and limsup of a sequence of reals; convergent sequences; Cauchy sequences; and series, absolute and conditional convergence of series. Prerequisite: Math 305 with minimum grade of C. (3)
- 556. ADVANCED CALCULUS II.** Limits, continuity, power series, partial differentiation; multiple, definite, improper, and line integrals; applications. Prerequisite: Math 555 with minimum grade of C. (3)
- 567. INTRODUCTION TO FUNCTIONAL ANALYSIS I.** Hilbert spaces, Banach spaces, Hahn-Banach Theorem, Banach Steinhaus Theorem, Open Mapping Theorem, weak topologies, Banach-Alaoglu Theorem, and Classical Banach spaces. Prerequisite: Math 556 with minimum grade of C. (3)
- 568. INTRODUCTION TO FUNCTIONAL ANALYSIS II.** Topics in Banach space theory. Prerequisite: Math 567 with minimum grade of C. (3)
- 572. INTRODUCTION TO PROBABILITY & STATISTICS.** Emphasis on standard statistical methods and the application of probability to statistical problems. Prerequisite: Math 261 with minimum grade of C, Math 262 with minimum grade of C, Math 263 with minimum grade of C, Math 264 with minimum grade of C. (3)
- 573. APPLIED PROBABILITY.** Emphasis on understanding the theory of probability and knowing how to apply it. Proofs are given only when they are simple and illuminating. Among topics covered are joint, marginal, and conditional distributions, conditional and unconditional moments, independence, the weak law of large numbers, Tchebycheff's inequality, Central Limit Theorem. Prerequisite: Math 261 with

minimum grade of C, Math 262 with minimum grade of C, Math 263 with minimum grade of C, Math 264 with minimum grade of C. (3)

**574. PROBABILITY.** Topics introduced in Math 573 will be covered at a more sophisticated mathematical level. Additional topics will include the Borel-Cantelli Lemma, the Strong Law of Large Numbers, characteristic functions, fourier transforms. Prerequisite: Math 573 with minimum grade of C. (3)

**575. MATHEMATICAL STATISTICS I.** Mathematical treatment of statistical and moment characteristics; probability models; random variables; distribution theory; correlation; central limit theorem; and multiparameter models. Prerequisite: Math 262 with minimum grade of C. (3)

**576. MATHEMATICAL STATISTICS II.** Mathematical treatment of statistical inference; maximum likelihood estimation and maximum likelihood ratio test; minimum variance unbiased estimators; most powerful tests; asymptotic normality and efficiency; and Bayesian statistics. Prerequisite: Math 575 with minimum grade of C. (3)

**577. APPLIED STOCHASTIC PROCESSES.** Emphasis on the application of the theory of stochastic processes to problems in engineering, physics, and economics. Discrete and continuous time Markov processes, Brownian Motion, Ergodic theory for stationary processes. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Math 573 with minimum grade of C. (3)

**578. STOCHASTIC PROCESSES.** Topics will include general diffusions, Martingales, and Stochastic differential equations. (3)

**590. TECHNIQUES IN TEACHING COLLEGE MATH.** Directed studies of methods in the presentation of college mathematics topics, teaching and testing techniques. This course is required of all teaching assistants, each semester, and may not be used for credit toward a degree. Z grade. (1-3)

**597. SPECIAL PROBLEMS I.** (1-3)

**598. SPECIAL PROBLEMS II.** (1-3)

**599. SPECIAL PROBLEMS III.** (1-3)

**625. MODERN ALGEBRA I.** Advanced group theory. Prerequisite: Math 525. (3)

**626. MODERN ALGEBRA II.** Advanced theory of rings and fields, including Galois theory and modules. Prerequisite: Math 625. (3)

**631. FOUNDATIONS OF GEOMETRY.** Development of Euclidean geometry in two and three dimensions using the axiomatic method; introduction to high dimensional Euclidean geometry and to non-Euclidean geometrics. (3)

**639. PROJECTIVE GEOMETRY.** Fundamental propositions of projective geometry from synthetic and analytic point of view; principle of duality; poles and polars; cross ratios; theorems of Desargues, Pascal, Brianchon; involutions. (3)

**647. TOPICS IN MODERN MATHEMATICS.** Survey of the more recent developments in pure and applied mathematics. (3)

**649. CONTINUED FRACTIONS.** Arithmetic theory; analytic theory; applications to Lyapunov theory. (3)

**653. THEORY OF FUNCTIONS OF REAL VARIABLES I.** Lebesgue measure and integration; differentiation; bounded variation; and absolute continuity of functions. (3)

**654. THEORY OF FUNCTIONS OF REAL VARIABLES II.** General measure theory. (3)

**655. THEORY FUNCTIONS OF COMPLEX VARIABLES I.** Complex numbers; analytic functions; complex integration; Cauchy's theorem and integral formula; Liouville's theorem; maximum modulus principles; Schwarz's lemma; sequences and series of analytic's functions; isolated singularities; and the residue theorem. (3)

**656. THEORY FUNCTIONS OF COMPLEX VARIABLE II.** Conformal mappings; harmonic functions; and infinite products. (3)

**661. NUMERICAL ANALYSIS I.** Numerical linear algebra; error analysis; computation of eigenvalues and eigenvectors; and finite differences. (3)

**662. NUMERICAL ANALYSIS II.** Techniques for ordinary and partial differential equations; and stability and convergence analysis. (3)

- 663. SPECIAL FUNCTIONS.** Advanced study of gamma functions; hypergeometric functions; generating function; theory and application of cylinder functions and spherical harmonics. (3)
- 667. FUNCTIONAL ANALYSIS I.** Topological vector spaces (tvS); complete tvS; product and quotient tvS; separation theorems for convex sets; locally convex spaces; Krein-Milman theorem; linear operations; dual pairs and Mackey-Arens theorem; Alaoglu-Bourbaki theorem; and bornological and barreled spaces. (3)
- 668. FUNCTIONAL ANALYSIS II.** Topics in applied functional analysis. (3)
- 669. PARTIAL DIFFERENTIAL EQUATIONS I.** Classical theories of wave and heat equations. (3)
- 670. PARTIAL DIFFERENTIAL EQUATIONS II.** Hilbert space methods for boundary value problems. Prerequisite: Math 669 with minimum grade of C. (3)
- 673. ADVANCED PROBABILITY I.** Topics in probability at an advanced level; measure theoretic foundations; infinitely divisible laws; and stable laws. Corequisite: Math 654. (3)
- 674. ADVANCED PROBABILITY II.** Multidimensional central limit theorem; strong laws; and law of the integrated logarithm. Prerequisite: Math 673 with minimum grade of C. (3)
- 675. ADVANCED MATHEMATICAL STATISTICS I.** Univariate distribution functions and their characteristics; moment generating functions and semi-invariants; Pearson's system; Gram-Charlier series; inversion theorems. (3)
- 676. ADVANCED MATHEMATICAL STATISTICS II.** Multivariate distributions and regression systems; multiple and partial correlation; sampling theory; statistical hypotheses; power and efficiency of tests. (3)
- 677. ADVANCED STOCHASTIC PROCESSES I.** Topics in the theory of stochastic processes; separability; Martingales; stochastic integrals; and the Wiener process. Prerequisite: Math 674 with minimum grade of C. (3)
- 678. ADVANCED STOCHASTIC PROCESSES II.** Gaussian process; random walk; Ornstein-Uhlenbeck process; and semi- group theory for diffusions. Prerequisite: Math 674 with minimum grade of C. (3)
- 679. STATISTICAL BIOINFORMATICS.** Introduction to bioinformatics, an interdisciplinary study that combines techniques and knowledge in mathematical, statistical, computational, and life sciences in order to understand the biological significance of genetic sequence data. Prerequisite: Math 575 with minimum grade of C. (3)
- 681. GRAPH THEORY I.** Primarily topics in Matroid theory, including duality, minors, connectivity graphic matroids, representable matroids, and matroid structure. Connections between the class of matroids with the classes of graphs and projective geometries are also studied. (3)
- 682. GRAPH THEORY II.** Topics in graph theory, including trees, connectivity, matchings, paths, cycles, coverings, planarity, graph colorings, networks and directed graphs. External graph structure, applications, and algorithms will also be studied. (3)
- 697. THESIS.** No grade. (1-12)
- 700. SEMINAR IN TOPOLOGY.** May be repeated for credit. (3)
- 710. SEMINAR IN ALGEBRA.** May be repeated for credit. (3)
- 750. SEMINAR IN ANALYSIS.** May be repeated for credit. (3)
- 775. SEMINAR IN STATISTICS.** May be repeated for credit up to a maximum of 9 hours. Consent of instructor. (3)
- 780. SEMINAR IN GRAPH THEORY.** May be repeated for credit up to a maximum of 9 hours. (3)
- 797. DISSERTATION.** No grade. (1-18)

## **MODERN LANGUAGES**

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Professor Donald Dyer, chair • 115C Bondurant Hall

[http://www.olemiss.edu/depts/modern\\_languages/](http://www.olemiss.edu/depts/modern_languages/)



Overview: The Department of Modern Languages offers minors and Bachelor of Arts (B.A.) majors in Chinese, French, German, Linguistics and Spanish, along with minors in Arabic, Chinese, French, German, Italian, Japanese, Korean, Linguistics, Portuguese, Russian, and Spanish. At the graduate level, the department offers the Master of Arts (M.A.) in Modern Languages with emphases in French, German, Spanish, and Teaching English as a Second Language (TESL).

Preliminary Requirements: The M.A. in Modern Languages degree with a specialization in a modern language requires, as a prerequisite, 30 hours of course work in the language in which the student intends to specialize (French, German, or Spanish) or a total of 30 hours in two or three languages, ancient and/or modern, provided that at least 18 hours are in the major language. In extraordinary cases, this prerequisite may be modified.

The M.A. in Modern Languages degree with a specialization in Teaching English as a Second Language (TESL) program requires, as a prerequisite, 30 hours in English, linguistics or a foreign language, or a total of 30 hours in any combination of the above, provided that a minimum of at least 18 hours are in one of the fields. In extraordinary cases, this prerequisite may be modified.

### **M.A. in Modern Languages**

Description: The Department of Modern Languages offers the M.A. in Modern Languages with emphases in French, German, Spanish, and Teaching English as a Second Language (TESL).

Course Requirements: Students must satisfy the requirements for either the emphasis in French, German, Spanish, or TESL.

### **Specialization in French**

Description: An M.A. in Modern Languages with a specialization in French gives graduates a high proficiency in communicative skills and a deep awareness of cultures in the French-speaking world. The degree prepares students for a teaching career at a variety of levels as well as doctoral work in the discipline.

Course Requirements: Two options are available. One option requires 24 hours of graduate-level course work with a minimum of 15 hours in the major field (French) plus a thesis in the major field, and a maximum of 9 hours in the minor field, subject to approval of the department. The second option requires 36 hours of graduate-level course work, of which a minimum of 24 hours must be in the major field and up to 12 hours in one or more minor fields, subject to department approval.

Other Academic Requirements: Students must maintain a B average in their course work or be subjected to probation and/or expulsion from the program.

### **Specialization in German**

Description: An M.A. in Modern Languages with a specialization in German gives graduates a high proficiency in communicative skills and a deep awareness of cultures in the German-speaking world. The degree prepares students for a teaching career at a variety of levels as well as doctoral work in the discipline.

Course Requirements: Two options for completing the degree are available, each of which requires 36 hours and must include Germ 672. The two options are as follows: (1) a minimum of 24 hours of course

work in German and between 6 and 12 hours of course work in a departmentally approved subfield or (2) a minimum of 24 hours of course work in German and between 6 and 12 hours of thesis work.

Other Academic Requirements: Students must maintain a B average in their course work or be subjected to probation and/or expulsion from the program.

### **Specialization in Spanish**

Description: An M.A. in Modern Languages with a specialization in Spanish allows students to focus on literature or linguistics and gives graduates a high proficiency in communicative skills and a deep awareness of cultures in the Spanish-speaking world. The degree prepares students for a teaching career at a variety of levels as well as doctoral work in the discipline.

Course Requirements: Three options for completing the degree are available, all of which require 36 hours and must include Span 672 and 572 as well as two of the following four literature survey courses: Span 577, 578, 579, and 580. The three options are as follows: (1) 33 hours of course work in Spanish including all four literature survey courses (Span 577, 578, 579, and 580) and one elective; (2) a minimum of 24 hours of course work in Spanish and between 6 and 12 hours of course work in a departmentally approved subfield; or (3) a minimum of 24 hours of course work in Spanish and between 6 and 12 hours of thesis work. Students may not both write a thesis and study a subfield.

Other Academic Requirements: Students must maintain a B average in their course work or be subjected to probation and/or expulsion from the program.

### **Specialization in TESL**

Description: Students who specialize in TESL learn best practices in the teaching of English as a second language, training, most importantly, for careers as English-language teachers. With its heavy focus on applied and theoretical linguistics, the TESL specialization within the modern languages master's program also prepares its graduates for doctoral work in the discipline.

Course Requirements: The specialization in TESL requires 36 hours of graduate course work, including the 21 hour core: Ling 600; TESL 542 or 672; TESL 631, 645, 647, and 695; and Engl 501 or 592. Three options for the degree are available: 1) 36 hours of graduate course work in TESL, Ling, MLLL, and Engl; 2) 24 hours of graduate course work in TESL, Ling, MLLL, and Engl, and 12 hours of graduate course work in a minor field approved by the department; or 3) 24 hours of graduate course work in TESL, Ling, MLLL, and Engl, and 12 hours of thesis work, including TESL 694.

Other Academic Requirements: Students must maintain a B average in their course work or be subjected to probation and/or expulsion from the program.

### **Graduate Certificate in TESL (Teaching English as a Second Language)**

Description: Students who specialize in TESL learn best practices in the teaching of English as a second language. This graduate certificate program is designed for students seeking add-on endorsements to their current teaching certifications, for students seeking to teach English overseas, and for students preparing for graduate training in TESL, applied linguistics, or a related field.

Course Requirements: The graduate certificate in TESL requires 15 hours of graduate course work and 3 hours of supervised teaching (TESL 645). The 15 hours of graduate course work must include TESL 542 and Ling 501 or Ling 600 and 9 hours of electives chosen from the following: TESL 552, 620, 631, 640, 647, 650, 689, 694, 695 and/or Ling 509, 510, 592, 639, 640.

Other Academic Requirements: A minimum GPA of 3.0 is required for courses counted toward the certificate. The time limit for completing the certificate program is four years.

### **Arab**

**511. INTRODUCTION TO ARABIC LITERATURE.** Discussion of major Arabic literary figures and their works. Prerequisite: Arab 412. (3)

**512. INTRODUCTION TO THE QU'RAN.** The language of the Qu'ran. Prerequisite: Arab 412. (3)

**514. ARABIC LITERATURE, CULTURE AND THOUGHT.** Advanced study of functional language usage. May be repeated once for credit. Prerequisite: Arab 412. (3)

### **Chinese-Chin**

**511. CHINESE PHILOLOGY.** Chinese linguistics, literature, and classical readings. Prerequisite: Chin 412 or Chin 414. (3)

**512. CHINESE CULTURE & CIVILIZATION.** Chinese philosophy, history, economy, and government. Prerequisite: Chin 412 or Chin 414. (3)

**513. CHINESE FOR ADVANCED PROFICIENCY.** Students will engage in discussions on a variety of topics in concrete and abstract terms. Prerequisite: Chin 412 or Chin 414. (3)

**596. CHINESE CAPSTONE ACADEMIC PROGRAM.** Students from the university's Chinese Flagship program direct-enroll at a university in China. Z grade. Prerequisite: Approval of the Director of the Chinese Flagship Program. (1-15)

**598. CHINESE CAPSTONE INTERNSHIP.** Students from the Chinese Flagship Program complete a professional internship for a Chinese company working in China. Z grade. Prerequisite: Approval of the Director of the Chinese Flagship Program. (1-6)

### **French-Fr**

**561. ADVANCED FRENCH & FRANCOPHONE CINEMA.** Advanced study of the major developments in French and Francophone cinema. Prerequisite: Fr 331. (3)

**571. ADVANCED GRAMMAR AND COMPOSITION.** Review and analysis of the more sophisticated grammatical structures of the French language. Prerequisite: Fr 304, 9 hours of FR courses at the 300-level or above. (3)

**572. FRENCH PHONETICS AND PHONOLOGY.** Introduction to the production of French sounds, using linguistic analysis and articulatory practice to improve pronunciation skills. (Same as Ling 552). Prerequisite: Fr 330, 9 hours of FR courses at the 300-level or above. (3)

**574. HISTORY OF THE FRENCH LANGUAGE.** Development of the phonological and grammatical systems of French from Latin to its modern dialects. (Same as Ling 554). Prerequisite: Fr 571, 9 hours of FR courses at the 300-level or above. (3)

**575. TOPICS IN APPLIED FRENCH LINGUISTICS.** May be repeated once for credit. (Same as Ling 555). Prerequisite: Fr 571, 9 hours of FR courses at the 300-level or above. (3)

**577. SURVEY OF FRENCH LITERATURE I.** A survey of the major texts and the development of literary genres prior to 1789. Prerequisite: Fr 331, 9 hours of FR courses at the 300-level or above. (3)

**578. SURVEY OF FRENCH LITERATURE II.** A survey of major texts and the development of literary genres after 1789. Prerequisite: Fr 331, Prerequisites: Fr 303 & Fr 304, 9 hours of FR courses at the 300-level or above. (3)

**579. SURVEY OF FRENCH LYRIC POETRY.** French poetic forms and movements over several centuries. Prerequisite: Fr 331. (3)

**580. SURVEY OF FRENCH THEATER.** A survey of major dramatic works in French. Prerequisite: Fr 331 or Graduate Standing. (3)

**582. MEDIEVAL AND RENAISSANCE FRENCH LIT.** Study of the works of representative authors of the 11th through the 16th centuries. Prerequisite: Fr 577. (3)

**583. SEVENTEENTH-CENTURY FRENCH LITERATURE.** Study of the works of representative authors of the 17th century in France. Prerequisite: Fr 577, 9 hours of FR courses at the 300-level or above. (3)

**584. EIGHTEENTH-CENTURY FRENCH LITERATURE.** Study of the works of representative authors of the 18th century in France. Prerequisite: Fr 578, 9 hours of FR courses at the 300-level or above. (3)

**585. NINETEENTH-CENTURY FRENCH LITERATURE.** Study of the works of representative authors of the 19th century in France. Prerequisite: Fr 578, 9 hours of FR courses at the 300-level or above. (3)

**586. TWENTIETH-CENTURY FRENCH LITERATURE.** Study of the works of representative authors of the 20th century in France. Prerequisite: Fr 578, 9 hours of FR courses at the 300-level or above. (3)

**593. TOPICS IN CULTURAL STUDIES.** Content varies. Prerequisite: Fr 321, Fr 322, 9 hours of FR courses at the 300-level or above. (3)

**598. ADVANCED FRENCH STUDY ABROAD.** (1-12)

**599. SPECIAL TOPICS.** May be repeated once for credit. Prerequisites: Fr 303 & Fr 304 , Prerequisite: Fr 304 . (3)

**632. SEMINAR, FRENCH STUDIES II.** Content varies. May be repeated for credit. (3)

**671. RESEARCH METHODS.** Current research and analysis of language and literature for MLL graduate students. (3)

**672. RESEARCH & PRACTICE IN CLSRM SEC. LANG.** The goal of this course is to give an overview of second language acquisition, the theoretical underpinning of teaching and learning, and the practical considerations of classroom work. (3)

**673. SEMINAR.** May be repeated once for credit. (Same as TESL 673). (3)

**697. THESIS.** No grade. (1-12)

#### **German-Germ**

**529. CONTEMPORARY GERMAN.** (3)

**546. INTENSIVE ADVANCED GERMAN IN GERMANY.** Intensive advanced undergraduate/graduate German language instruction in Germany. (3)

**561. ADVANCED TOPICS IN GERMAN CINEMA.** Advanced study of culture, language use, history of film, cinema production, or other topics related to films made in the German-speaking world. Prerequisite: Germ 321 or Germ 331 or Graduate Standing. (3)

**571. ADVANCED GRAMMAR AND COMPOSITION.** Review of the finer points in grammar, style, and diction. Developing linguistic skills to appreciate literary language, read scholarly prose, and analyze texts. Prerequisite: Germ 304, 9 hours of GERM courses at the 300-level or above. (3)

**572. GERMAN PHONETICS AND PHONOLOGY.** Introduction to the production of German sounds, using linguistic analysis and articulatory practice to improve pronunciation skills. (Same as Ling 562). Prerequisite: Germ 330, 9 hours of GERM courses at the 300-level or above. (3)

**574. HISTORY OF THE GERMAN LANGUAGE.** Introduction to German philology and linguistics. Examination of origins and development of standard German and regional dialects from the Middle Ages to the present. (Same as Ling 564). Prerequisite: Germ 572, 9 hours of GERM courses at the 300-level or above. (3)

**575. TOPICS IN APPLIED LINGUISTICS.** May be repeated once for credit. (Same as Ling 565). Prerequisite: Germ 571, 9 hours of GERM courses at the 300-level or above. (3)

**577. SURVEY OF GERMAN LIT. & CULTURE I.** Introduction to the history of German literature and culture from the Middle Ages to the Age of Goethe. Prerequisite: Germ 331, 9 hours of GERM courses at the 300-level or above. (3)

**578. SURVEY OF GERMAN LIT. & CULTURE II.** Introduction to the history of German literature and culture from the Age of Goethe to the present. Prerequisite: Germ 331, 9 hours of GERM courses at the 300-level or above. (3)

- 584. THE AGE OF GOETHE.** Discussion of influential and representative works from the Sturm und Drang period, German Classicism, and Romanticism in theoretical writings, poetry, drama, novella, art, architecture, and music. Prerequisite: Germ 577, 9 hours of GERM courses at the 300-level or above. (3)
- 585. NINETEENTH-CENTURY GERMAN LITERATURE.** Acquaintance with cultural intellectual debates in Germany through in-depth discussion of 19th-century authors, literary works, art, and music. Prerequisite: Germ 578, 9 hours of GERM courses at the 300-level or above. (3)
- 586. TWENTIETH-CENTURY LITERATURE & CULTURE.** Acquaintance with contemporary culture and intellectual debates in Germany through in-depth discussion of 20th century authors, literary works, art, film, design, and music. Prerequisite: Germ 578, 9 hours of GERM courses at the 300-level or above. (3)
- 587. GERMAN FAIRY TALES.** Readings of classic 19th-century German fairy tales such as from the collection of the Brothers Grimm and discussion of how these tales have captured the popular imagination of many cultures over the years. (3)
- 593. TOPICS IN CULTURAL STUDIES.** Analysis of social, cultural, and political phenomena, inquiry into philosophical and theoretical issues, and/or study of influential ideas in German literature and culture. Content varies. May be repeated once for credit. Prerequisite: Germ 321, 9 hours of GERM courses at the 300-level or above. (3)
- 598. ADVANCED GERMAN STUDY ABROAD.** (1-12)
- 599. SPECIAL TOPICS.** May be repeated once for credit. (3)
- 671. RESEARCH METHODS.** Introduction to current research and analysis of language and literature for MLL graduate students. (3)
- 672. RESRCH. & PRAC. IN CLSRM. SEC. LAN. ACQ.** The goal of this course is to give an overview of second language acquisition, the theoretical underpinning of teaching and learning, and the practical considerations of classroom work. (3)
- 673. SEMINAR.** May be repeated once for credit. (Same as TESL 673). (3)
- 697. THESIS.** No grade. (1-12)

#### **Intensive English-IE**

**500. LANGUAGE USE IN AMERICAN UNIVERSITIES.** This course offers international students an introduction to disciplinary-specific language use in American universities. (Same as TESL 500). (3)

#### **Japanese-Japn**

**501. CONTEMPORARY JAPANESE.** This course is designed to further develop the four language skills to the advanced level through studying authentic materials such as newspapers, magazine articles and TV news broadcasts. Prerequisite: Japn 402. (3)

#### **Linguistics-Ling**

**501. DESCRIPTIVE GRAMMAR.** A structural examination of English grammar, with special attention to uses on different levels, formal and informal, standard and nonstandard, written and spoken; emphasis on phonology, morphology, and descriptive theories of grammar. (Same as Engl 501). Prerequisite: 1 of the following courses: ENGL 221, 222, 223, 224, 225, or 226. (3)

**502. HISTORICAL LINGUISTICS.** (Same as Engl 502). Prerequisite: Engl 313 or Graduate Standing. (3)

**505. HISTORY OF THE ENGLISH LANGUAGE II.** (Same as Engl 505). Prerequisite: Engl 431 or Graduate Standing. (3)

**509. LANGUAGE EVOLUTION.** Exploration of the development of human language as the result of evolutionary and other processes. (3)

**540. SPECIAL TOPICS IN LINGUISTICS.** (Same as Mlll 541). (3)

**541. ADV STUDY OF NORMAL LANGUAGE DEVELOPMENT** (Same as CSD 541). (3)

- 545. INDIGENOUS LANGUAGES AND PEDAGOGIES.** Examination of the issues, policies, theoretical foundations, and practices of indigenous peoples and other language minority communities from a sociolinguistic and language reclamation perspective. (Same as TESL 545). (3)
- 552. FRENCH PHONETICS AND PHONOLOGY.** (Same as Fr 572). Prerequisite: Fr 330. (3)
- 554. HISTORY OF FRENCH.** (Same as Fr 574). (3)
- 555. TOPICS IN APPLIED FRENCH LINGUISTICS.** (Same as Fr 575). (3)
- 562. GERMAN PHONETICS AND PHONOLOGY.** (Same as Germ 572). Prerequisite: Germ 330. (3)
- 564. HISTORY OF GERMAN.** (Same as Germ 574). (3)
- 565. TOPICS IN APPLIED GERMAN LINGUISTICS.** (Same as Germ 575). (3)
- 572. SPANISH PHONETICS AND PHONOLOGY.** (Same as Span 572). Prerequisite: Span 330. (3)
- 573. SPANISH MORPHOLOGY AND SYNTAX.** (Same as Span 573). Prerequisite: Span 330. (3)
- 574. HISTORY OF SPANISH.** (Same as Span 574). (3)
- 575. TOPICS IN APPLIED SPANISH LINGUISTICS.** (Same as Span 575). (3)
- 580. WORLD ENGLISHES.** This course will investigate the spread and development of English throughout the world. (Same as Engl 580). (3)
- 592. MODERN ENGLISH GRAMMAR.** Advanced treatment of syntactic structures with special attention to current interpretations; emphasis on morphology and generative transformational theories of syntax. (Same as Engl 592). (3)
- 595. SEMINAR IN LINGUISTICS.** (Same as Anth 595). (3)
- 600. FUNDAMENTALS OF LINGUISTICS FOR TESL.** Fundamentals of the field of linguistics for the Teaching of English as a Second Language. (3)
- 613. RESEARCH DESIGN AND ANALYSIS.** Historical and contemporary experimental approaches in communicative disorders; emphasis on normal parameters. (Same as CSD 613). (3)
- 615. FUNDAMENTALS OF LINGUISTIC SCIENCE.** Analysis of methods of describing any given language and of reconstructing its history, with outside papers emphasizing students' own linguistic interests. (3)
- 617. SEMINAR IN COMPARATIVE LINGUISTICS.** Discussion of linguistic concepts and methodologies used for describing the historical development and resulting structural similarities and differences among major Western languages such as, but not limited to, French, Spanish, German, English and Italian. (3)
- 639. DIRECTED RESEARCH IN LINGUISTICS.** Independent investigation and writing of a linguistic topic. (3)
- 655. ADVANCED SYMBOLIC LOGIC.** Advanced approaches to deductive symbolic logic. Topics covered include propositional logic, quantificational logic, and modal logic. (Same as Phil 655). (3)

#### **Modern Languages, Literature, and Linguistics-Mill**

- 541. SPECIAL TOPICS IN LINGUISTICS.** Advanced course dealing with special topics in phonology, morphology, and syntax. Recommended for graduate students interested in linguistics or language pedagogy. May be repeated for a total of 9 credit hours as long as content varies. (Same as Ling 540). (3)
- 599. SPECIAL TOPICS.** Special topics. May be repeated once for credit. (3)

#### **Spanish-Span**

- 529. CONTEMPORARY SPANISH.** (3)
- 561. ADVANCED TOPICS IN CINEMA IN SPANISH.** Advanced study of topics related to films made in Spanish from Spain or Spanish America. The topics may be in culture, esthetics, language use, the history of film, cinema production, or other areas. Prerequisite: Span 331, Span 321 or Span 322 or Graduate Standing. (3)
- 565. SPANISH AMERICAN WOMEN WRITERS.** Poetry, drama, and narrative written by Spanish American women with particular attention to the themes, theories, and questions surrounding gender and escritura femenina. Prerequisite: Span 331. (3)

- 571. ADVANCED GRAMMAR & COMPOSITION.** Review and analysis of more sophisticated grammatical structures of the Spanish language. Prerequisite: Span 304, 9 hours of SPAN courses at the 300-level or above. (3)
- 572. SPANISH PHONETICS & PHONOLOGY.** Introduction to the production of Spanish sounds, using linguistic analysis and articulatory practice to improve pronunciation skills. (Same as Ling 572). Prerequisite: Span 330, 9 hours of SPAN courses at the 300-level or above. (3)
- 573. SPANISH MORPHOLOGY AND SYNTAX.** Analysis of the Spanish morphemic system and its organization into syntactic structures. (Same as Ling 573). Prerequisite: Span 330, 9 hours of SPAN courses at the 300-level or above. (3)
- 574. THE HISTORY OF SPANISH LANGUAGE.** Development of the phonological and grammatical systems of Spanish from Latin to its modern dialects. (Same as Ling 574). Prerequisite: Span 572, 9 hours of SPAN courses at the 300-level or above. (3)
- 575. TOPICS IN APPLIED SPANISH LINGUISTICS.** Content varies. May be repeated once for credit. (Same as Ling 575). Prerequisite: Span 571, 9 hours of SPAN courses at the 300-level or above. (3)
- 576. ADVANCED SPANISH FOR BUSINESS.** Introduction to spoken and written language of the Spanish-speaking business world. Acquisition of and practice with general commercial terminology used in Spanish for such functional business areas as economics, management, marketing, finance, and import-export. Prerequisite: Span 571. (3)
- 577. SURVEY OF SPANISH LITERATURE I.** A study of the most representative writers of the Spanish Peninsula from the Epic through 1700. Prerequisite requirements for this course may also be satisfied by equivalent course work as approved by the department. Prerequisite: Span 331. (3)
- 578. SURVEY OF SPANISH LITERATURE II.** A study of the most representative writers of the Spanish Peninsula from 1701 to the present day. Prerequisite requirements for this course may also be satisfied by equivalent course work as approved by the department. Prerequisite: Span 331. (3)
- 579. SURVEY OF SPANISH AMERICAN LITERATURE I.** A survey of the canonical texts and movements of Spanish American literature from colonial times to modernism. Prerequisite requirements for this course may also be satisfied by equivalent course work as approved by the department. Prerequisite: Span 331. (3)
- 580. SURVEY OF SPANISH AMERICAN LITERATURE II.** A survey of the canonical texts and movements of Spanish American literature and culture from modernismo through the end of the 20th century. Prerequisite requirements for this course may also be satisfied by equivalent course work as approved by the department. Prerequisite: Span 331. (3)
- 582. CERVANTES.** Study of Cervantes' major works, including "Don Quixote" and "Novelas ejemplares" in light of modern theoretical approaches. Prerequisite: One 500-level Spanish course. (3)
- 583. GOLDEN AGE LITERATURE.** Major Spanish writers of the 16th and 17th centuries. Prerequisite: One 500-level Spanish course. (3)
- 585. EIGHTEENTH AND 19TH CENTURY SPAN. LIT.** Study of the works of representative authors of the most important literary currents of 18th and 19th century Spain. Prerequisite: One 500-level Spanish course. (3)
- 586. MODERN SPANISH LITERATURE.** Study of literary works from the Generation of '98 to the present in Spain. Prerequisite: One 500-level Spanish course. (3)
- 587. SPANISH AMERICAN SHORT STORY.** Development of the short story as a literary genre in Spanish America, with emphasis on recent trends. Prerequisite: One 500-level Spanish course. (3)
- 588. SPANISH AMERICAN POETRY.** Analysis of texts representative of major poetic movements in Spanish America. Prerequisite: One 500-level Spanish course. (3)
- 589. SPANISH AMERICAN NOVEL.** Study of selected novels of major Spanish American writers. Prerequisite: One 500-level Spanish course. (3)
- 593. TOPICS IN CULTURAL STUDIES.** May be repeated for credit. Prerequisite: One 500-level Spanish course. (3)
- 598. ADVANCED SPANISH STUDY ABROAD.** (1-12)

- 599. SPECIAL TOPICS.** Content varies; may be repeated once for credit. (3)
- 631. SEMINAR, HISPANIC STUDIES I.** Content varies. May be repeated for credit. (3)
- 632. SEMINAR, HISPANIC STUDIES II.** Content varies. May be repeated for credit. (3)
- 671. RESEARCH METHODS.** Introduction to current research and analysis of language and literature and MLL graduate students. (3)
- 672. RESEARCH & PRACTICE IN CLSRM SEC. LANG.** The goal of this course is to give an overview of second language acquisition, the theoretical underpinnings of teaching and learning and the practical considerations of classroom work. (3)
- 673. SEMINAR.** (Same as TESL 673). (3)
- 697. THESIS.** No grade. (1-12)

#### **Teaching English as a Second Language-TESL**

- 500. LANGUAGE USE IN AMERICAN UNIVERSITIES.** This course offers international students an introduction to disciplinary-specific language use in American universities. (Same as IE 500). (3)
- 542. TEACHING ENGLISH AS A SECOND LANGUAGE.** Methodological issues in the teaching of English as a second language within the framework of various curricular requirements. (3)
- 545. INDIGENOUS LANGUAGES AND PEDAGOGIES.** Examination of the issues, policies, theoretical foundations, and practices of indigenous peoples and other language minority communities from a sociolinguistic and language reclamation perspective. (Same as Ling 545). (3)
- 552. INTERCULTURAL COMMUNICATION.** This course introduces students to understanding cross-cultural communication. Students will analyze how people talk while participating in a conversation. (3)
- 614. SEMINAR IN PHONOLOGY.** Basic concepts about sounds of human languages, using English as the primary source of data; current theoretical trends in the organization of sound systems. (3)
- 615. SEMINAR IN MORPHOLOGY.** Basic concepts about word formation and vocabulary in human languages, using English as the primary source of data; current trends in word analysis. (3)
- 620. SEMINAR IN SOCIOLINGUISTICS.** This course will cover sociolinguistic theoretical models and methodologies, as well as foundational concepts and definitions. Prerequisite: Ling 600. (3)
- 631. ASSESSMENT IN SECOND LANG ACQUISITION.** An introduction to the theoretical and the practical issues involved in the construction, interpretation, and utilization of tests of second/foreign languages. (3)
- 640. BILINGUALISM, EDUCATION AND IDENTITY.** This course will include basic principles and theories of bilingualism, multilingual and multicultural identity, and bilingual education. (3)
- 645. PRACTICUM IN TEACH ENGL AS A SECOND LANG** Supervised field experiences in teaching English as a Second Language. Prerequisite: TESL 542, English oral proficiency exam score of Advanced-Low on the ACTFL scale. . (3)
- 646. LANGUAGE TEACHER RESEARCH.** This course offers students studying abroad the opportunity to practice English teaching working with an experienced teacher. (3-6)
- 647. CULT. DIMEN. OF SECOND LANG ACQUISITION.** Sociolinguistics and ethnographic perspectives on issues faced in cross-cultural communication and language teaching in multicultural classrooms. Focus on the interaction of language, culture and communication. (3)
- 650. LANGUAGE POLITICS AND SOCIAL POLICY.** Students will examine significant approaches, methods, and issues of language policy, planning, and education. (3)
- 660. INTRO TO TRANSLATION THEORY AND PRACTICE.** An introduction to the history, theory, and practice of translation, with a focus on the study of current and historical theories and research-based practices. (3)
- 672. RESEARCH & PRACTICE IN CLSRM SEC. LANG.** The goal of this course is to give an overview of second-language acquisition, the theoretical underpinnings of teaching and learning, and the practical considerations of classroom work. (3)



**673. ADVANCED METHODS OF TEACHING SECOND LANG.** A theoretical and practical approach to the training of teachers in second languages. (Same as Fr 673 , Germ 673 , Span 673). Prerequisite: Span 672 or Fr 672 or Germ 672. (3)

**680. CRITICAL ISSUES IN TESL.** The broad field of critical applied linguistics and its relationship to language teaching. (3)

**689. TEACHING SECOND LANGUAGE WRITING.** Research and practical application of theories of composition and rhetoric for second-language writers. Prerequisite: Engl 588 or Span 672 or Fr 672 or Germ 672 or TESL 542. (3)

**694. RESEARCH IN APPLIED LINGUISTICS.** Survey of approaches to research in applied linguistics and second language acquisition with hands-on guidance in designing small-scale research studies. Prerequisites: TESL 542 or TESL 672 or permission of the instructor . Prerequisite: TESL 542 or TESL 672. (3)

**695. SEMINAR IN SECOND LANGUAGE ACQUISITION.** An in-depth study of theories and models of second language acquisition with emphasis on relevance to language teaching and learning. (3)

**697. THESIS.** No grade. (1-12)

## MUSIC — MUS

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Professor Charles Gates, chair • 164 Scruggs Hall

<http://www.olemiss.edu/depts/music/>

Overview: The Department of Music offers a Master of Music (M.M.) with emphases in choral conducting, music education, and performance, and the Doctor of Philosophy (Ph.D.) in music—music education emphasis.

Accreditation: The Department of Music is accredited by the National Association of Schools of Music.

Prerequisites: A Bachelor of Music, or equivalent degree, from a recognized institution is required. An applicant's undergraduate record, letters of recommendation, and other credentials, including evidence of a senior recital or its equivalent (for music performance) must show the applicant to be qualified for graduate work. Entrance into the MM vocal performance degree program requires that the student's transcript(s) show grades of C or better in two years of foreign language, which must include one semester each of 1) Elementary Italian, 2) Elementary French, 3) Elementary German, and 3) an additional higher-level course in any of these three languages. Also required are at least two diction courses (covering English, Italian, French, and German), two vocal literature courses (art song and opera), and one vocal pedagogy course. The student must have presented the equivalent to a Senior Recital (50-60 minute program) with at least four languages represented including art song and arias.

Examinations: All students must take the general test of the Graduate Record Examination and a set of departmentally administered examinations in performance, aural skills, music theory, and music history. Information about the latter examinations can be obtained from the departmental graduate program coordinator.

Summary of Application Requirements:

- GRE verbal and quantitative scores
- Official transcripts showing a bachelor's degree in music or its equivalent
- An undergraduate GPA of 3.0 (out of 4.0); a 2.7 GPA may result in provisional admission
- Departmentally administered entrance exams
- Completed application to the Graduate School

- For applied music applicants, evidence of a senior recital or its equivalent

Students who are not admitted in full standing (e.g., admitted as conditional, qualifying, or nondegree status) must adhere to Graduate School policies regarding course work.

Other Academic Requirements: In addition to course work, students must complete a recital and must pass a final oral or written examination.

I. Thesis or Recital

- A. A student must be in full standing to enroll in Mus 697 (Thesis) or Mus 695 (Recital).
- B. For information concerning format, procedures, and specifications of thesis, consult the Graduate Student's Handbook and A Manual of Theses, Doctoral Essays and Dissertations (available at the Graduate School).
- C. Students must be enrolled for at least 3 hours during the semester in which they intend to graduate.
- D. If a thesis is written, a thesis committee is formed by the major professor in consultation with the student and appointed by the department chair. The committee shall consist of the major professor, another representative of the student's emphasis and any other member of the graduate music faculty.

II. Oral or Written Examination

- A. Early in the semester in which the student intends to graduate, the major professor, in consultation with the student, shall formulate a committee of graduate music faculty members to administer the oral exam (normally this is the thesis committee) or the written exam in the music education program.
- B. The Graduate Program coordinator should be contacted to set a date for the oral or written exam. Time should be allotted after the oral exam to allow for thesis corrections or further study required by the committee.
- C. If the student's emphasis is applied music, the committee must be formulated prior to the recital so that the members may attend.
- D. The thesis must be presented to all members of the committee in its completed form at least two weeks prior to the oral exam. The oral or written exam will primarily concern the thesis and the courses taken toward the degree.
- E. After successful completion of the oral exam, two copies of the thesis must be presented to the Graduate School before the regular examination period for the semester in which the student intends to graduate.
- F. If the student's emphasis is music education, a written exam will be administered. The student should consult the major professor early in the semester in which they intend to graduate in order to formulate the exam committee. The student may consult each member of the exam committee to solicit questions or areas of suggested study prior to the exam. The committee members may choose not to provide questions or areas of study.

**Master of Music, Emphasis in Music Education**

Description: The M.M. degree with an emphasis in music education is designed to give the student advanced training in music and K-12 music education and/or prepares him/her for study at the doctoral level.

Course Requirements: Requirements for the M.M. degree with emphasis in music education are as follows:

Mus 520-Introduction to Music Research	2
Music history/literature	3
Music theory/composition	3
Music theory/comp. or music history/lit.	3
Mus 620-Music Education Research	3
Select 3 hours of music education from	3
Mus 619-Foundations of Music Education	

Mus 622-Seminar in Music Education	
Mus 625-Assessment and Supervision of Music Education	
Music education electives chosen from	
Mus 523, 524, 525, 536, or 551	3
Music electives	5
Mus 697-Thesis/or 6 hours of music education courses	
for students who elect the nonthesis option	6

### **Master of Music, Emphasis in Performance**

Description: The M.M. degree with an emphasis in performance is designed to prepare a student to become a professional musician (performing as a pianist, woodwind, brass, string, or percussion instrumentalist, or vocalist) and/or prepares him/her for further graduate study or professional training. The performance emphasis can be completed with a concentration (option) in either piano, vocal, or instrumental.

Course Requirements: Students pursuing the M.M. with emphasis in performance must satisfy a concentration (option) in either piano, vocal, or instrumental.

#### **Vocal**

Course Requirements: The requirements for the M.M. with emphasis in music performance and concentration (option) in vocal are as follows:

Mus 520-Introduction to Music Research	2
Mus 521-Advanced Singer's Diction I	2
Mus 522-Advanced Singer's Diction II	2
Music history/literature	3
Music theory/composition	3
Music theory/comp. or music history/lit.	3
Voic 541 or higher-Voice Performance	8
Mus 695-Public Recital	2
Mus 595-Opera Theatre Workshop V	1
Mus 596-Opera Production Workshop V	1
Mus 597-Opera Theatre Workshop VI	1
Mus 598-Opera Production Workshop VI	1
Mus 623 or Mus 624-Adv. Song Lit. or Adv. Opera/Oratorio Lit.	2
Mus 605-Pedagogy of Music Performance	2

#### **Instrumental**

Course Requirements: The requirements for the M.M. with emphasis in music performance and concentration (option) in instrumental performance are as follows:

Mus 520-Introduction to Music Research	2
Music history/literature	3
Music theory/composition	3
Music theory/comp. or music history/lit.	3
___ 541 or higher-Music Performance	10
Mus 695-Public Recital	2
Mus 565-Instrumental Solo Lit.	2
Mus 561-Symphonic Lit.	3
or Mus 563-Chamber Lit.	(3)
or Mus 607-Advanced Wind Band Lit.	(3)
Mus 605-Pedagogy of Music Performance	2
Music elective	2

### **Piano**

Course Requirements: The requirements for the M.M. with emphasis in music performance and concentration (option) in piano are as follows:

Mus 520-Introduction to Music Research	2
Music history/literature	3
Music theory/composition	3
Music theory/comp. or music history/lit.	3
Pian 541 or higher-Piano Performance	10
Mus 695-Public Recital	2
Mus 608-Advanced Keyboard Lit.	4
Mus 605-Pedagogy of Music Performance	2
Music elective	2

### **Master of Music, Emphasis in Choral Conducting**

Description: The M.M. degree with an emphasis in choral conducting is designed to give the student advanced training in choral conducting and score study and/or prepares him/her for study at the doctoral level.

Course Requirements: Requirements for the M.M. degree with emphasis in choral conducting are as follows:

Mus 520-Introduction to Music Research	2
Mus 562-Advanced Choral Literature	3
Music history/literature	3
Music theory/composition	3
Music theory/comp. or music history/lit.	3
Mus 524-Advanced Choral Directing	3
Mus 529 or 605-Vocal Pedagogy	2
Mus 521-Advanced Singer's Diction I	2
Voic 521-Applied Voice	2
Choral ensemble	1
Mus 613-Directed Individual Study in Choral Music	3
Mus 695-Public Recital	2
Music elective	2

### **Ph.D. in Music with an Emphasis in Music Education**

Description: The program leading to the Ph.D. in music with the emphasis in music education is designed for students who wish to pursue advanced study in preparation for university teaching, research, and other leadership roles in music education. The program is individualized to fit each student's interest and background.

#### **Preliminary Requirements**

Area of Concentration: The Ph.D. degree in music is offered with an emphasis in music education only.

Prerequisite: A master's degree in music or music education from a recognized institution is required. In addition to the requirements of the Graduate School, those wishing to pursue the Ph.D. in music—music education emphasis must show evidence of three years of full-time employment in teaching or a related position. Additional requirements include submission of a writing sample and a video of teaching.

Examinations: All students must take the general test of the Graduate Record Examination and a set of departmentally administered examinations in performance, aural skills, music theory, and music history. Information about the latter examinations can be obtained from the departmental graduate program coordinator.

Residence: Three academic years of full-time study, or the equivalent, beyond the bachelor's degree constitute the minimum requirement. A minimum of two academic years of full-time graduate work must be completed at the University of Mississippi. At least one academic year of full-time study, or the equivalent, must be in continuous residence.

Goals/Mission Statement: The Ph.D. in music with an emphasis in music education is designed to give the student advanced training in research and methodology appropriate for teaching at the university level.

Course Requirements

Research-12 credits

Must include courses in experimental research, historical research, observation research and statistics

Music Education Methods-6 credits

Two courses selected from Mus 551, Orff Level I; Mus 536, Kodaly in American Music Education; Mus 524, Advanced Choral Directing; Mus 523, Advanced Band Directing.

Music Education Foundations–6 credits

Mus 548-Psychology of Music

Mus 619-Foundations of Music Education

Music History-3 credits

Music Theory-3 credits

Elective Area–9 credits

May include choral music, applied pedagogy, music theory, music history/literature, or music education

Dissertation–18 credits

Other Academic Requirements: At least 57 hours beyond the master's degree are considered a minimum program. Mus 575, World Music, and Mus 620, Introduction to Research in Music Education, or their equivalent, are required at the master's level and, if the student has not had these or similar courses, they must enroll in them before completion of the Ph.D.

Dissertation Requirements: A minimum registration of 18 semester hours are required for the dissertation. After passing the comprehensive examinations, the student must submit a project topic suitable for a doctoral dissertation in the form known as the prospectus. The prospectus must be approved by the advisory committee. The prospectus advisory committee shall consist of two members of the music education faculty and one faculty member from the 9 credit elective area. Once the prospectus is approved, the dissertation committee will consist of two members of the music education faculty, one additional faculty member from the music department, and a fourth member from the university faculty outside the music department.

## Music-Mus

- 501. MUSIC OF THE MEDIEVAL/RENAISSANCE PERIOD.** A study of European music from the seventh to the 16th centuries, its genres, composers, techniques, and its connection to other arts and philosophy of the period. (3)
- 502. MUSIC OF THE BAROQUE PERIOD.** A study of Western music of the 17th and early 18th century, its genres, composers, techniques, and its connection to other arts and philosophy of the period. (3)
- 503. MUSIC OF THE CLASSICAL PERIOD.** A survey of Western music (emphasizing major composers, genres, and styles) from the mid-18th to the early 19th century, including its relationship to contemporary culture and history. (3)
- 504. MUSIC OF THE ROMANTIC PERIOD.** A survey of Western music (emphasizing major composers, genres, and styles) in the 19th century, including its relationship to contemporary culture and history. (3)
- 505. ANALYSIS I.** A study of techniques appropriate to the analysis of music of the Renaissance and Baroque periods. (3)
- 506. ANALYSIS II.** A study of techniques appropriate to the analysis of music of the Classical and Romantic periods. (3)
- 507. ANALYSIS III: 20TH CENTURY.** A study of techniques appropriate to the analysis of music of the 20th century. (3)
- 508. ADVANCED EAR TRAINING.** Advanced studies in rhythmic, melodic, and harmonic dictation and sight-singing. Although most exercises employ the major and minor modes, other modes are included. (3)
- 509. COMPOSITION V.** Directed studies in musical composition. May be repeated once for credit. Prerequisite: Mus 404. (2)
- 510. COMPOSITION VI.** Directed studies in musical composition. May be repeated once for credit. Prerequisite: Mus 509. (2)
- 512. 16TH CENTURY COUNTERPOINT.** A study of the compositional techniques of contrapuntal music of the 16th century. (3)
- 513. MUSIC SINCE 1900.** A study of the art music of the 20th century, its relation to modernism and other ideologies and its place in contemporary society. (3)
- 514. 18TH CENTURY COUNTERPOINT.** A study of the compositional techniques of contrapuntal music of the 18th century. (3)
- 515. HISTORY OF OPERA.** A historical survey of the opera. (3)
- 516. HISTORY AND LIT OF HYMNODY IN AMERICA.** Discussion and materials related to the development, history, and hymnody of Christian sacred music in the United States between 1600 and the present. (3)
- 517. AFRI-AMERICAN MUSICAL TRADITIONS.** A survey of styles arising from black American culture: the African background, spirituals, blues, and gospel music and their influence on American and world music. (Same as Aas 517). (3)
- 518. HISTORY OF JAZZ.** The nature, origins, and evolution of jazz will be studied, using recordings, films, and source readings. (Same as Aas 518). (3)
- 519. INSTRUMENTAL AND VOCAL ARRANGING.** Intensive study of arranging for various musical media, in styles chosen by students. Emphasis for each student may center upon instrumental music, vocal music, or any combination of the two. (2)
- 520. INTRODUCTION TO MUSIC RESEARCH.** Familiarity with the library materials and techniques necessary for advanced study in music. (2)
- 521. ADVANCED SINGER'S DICTION I.** An advanced study of Italian, French, and German diction for the solo singer and choral music educator. Prerequisite: Mus 207, Mus 208. (2)
- 522. ADVANCED SINGER'S DICTION II.** Advanced interpretive coaching in the performance of English, Italian, French, German, Spanish, and/or Russian art song and operative literature with emphasis on diction. Prerequisite: Mus 521. (2)

- 523. ADVANCED INSTRUMENTAL DIRECTING.** Methods of instrumental music with emphasis on research in the field. Topics include repertoire, conducting, rehearsing, and program building. (3)
- 524. ADVANCED TECHNIQUES OF CHORAL DIRECTING.** Methods of choral directing with emphasis on expression, musicianship, and conducting techniques. Covers areas such as baton technique, score study and memorization, analysis of orchestration, rehearsal techniques, and program building. (3)
- 525. ADVANCED TECHNIQUES OF MARCHING BAND.** Current styles and trends of marching band. Concepts, drills, and charting. (2)
- 526. HISTORY OF MUSIC IN THE UNITED STATES.** Study of music in the United States from the early colonial period to the present with special emphasis in popular music developments. (3)
- 527. JAZZ ENSEMBLE.** Standards and new repertoire with opportunities for individual improvisation and ensemble jazz experience. (1)
- 528. JAZZ ENSEMBLE.** Standards and new repertoire with opportunities for individual improvisation and ensemble jazz experience. (1)
- 529. VOCAL PEDAGOGY.** Basic anatomy of the vocal mechanism and a basic understanding of pedagogical principles and applications in voice teaching. (2)
- 530. SPECIAL PROJECTS IN MUSIC EDUCATION.** Special topics in subject areas related to music education. (1-3)
- 531. UNIVERSITY ORCHESTRA.** Rehearsal and performance of standard orchestral literature. (1)
- 532. UNIVERSITY ORCHESTRA.** Rehearsal and performance of standard orchestral literature. (1)
- 533. UNIVERSITY BAND.** Ole Miss Rebel Marching Band and/or UM Wind Ensemble during the fall semester. UM Wind Ensemble, Symphonic Band, or Concert Band during the spring semester. (1)
- 534. UNIVERSITY BAND.** Ole Miss Rebel Marching Band and/or UM Wind Ensemble during the fall semester. UM Wind Ensemble, Symphonic Band, or Concert Band during the spring semester. (1)
- 536. KODALY MUSIC EDUCATION IN AMERICA.** An introductory study of the philosophy and teaching methods of the Kodaly concept of music education as practiced in the United States. (3)
- 537. INSTRUMENTAL CHAMBER ENSEMBLE.** Chamber music study and performance in appropriate combinations for all instrumentalists. (1)
- 538. INSTRUMENTAL CHAMBER ENSEMBLE.** Chamber music study and performance in appropriate combinations for all instrumentalists. (1)
- 539. CONCERT SINGERS.** Rehearsal and performance of a variety of musical styles, with emphasis on classical forms. (1)
- 540. CONCERT SINGERS.** Rehearsal and performance of a variety of musical styles, with emphasis on classical forms. (1)
- 541. STEEL DRUM ENSEMBLE.** Rehearsal and performance of traditional Caribbean music as well as popular, jazz, and classical arrangements for steel drums. (1)
- 542. STEEL DRUM ENSEMBLE.** Rehearsal and performance of traditional Caribbean music as well as popular, jazz, and classical arrangements for steel drums. (1)
- 543. EARLY MUSIC PERFORMANCE ENSEMBLE.** Rehearsal and performance of European vocal and instrumental music before 1750 and related repertoires. (1)
- 544. EARLY MUSIC PERFORMANCE ENSEMBLE.** Rehearsal and performance of European vocal and instrumental music before 1750 and related repertoires. (1)
- 545. UNIVERSITY CHORUS.** Rehearsal and performance of works for men's, women's, and mixed chorus. (1)
- 546. UNIVERSITY CHORUS.** Rehearsal and performance of works for men's, women's, and mixed chorus. (1)
- 547. MUSIC TECHNOLOGY I.** Methods of synthesis, signal processing, recording, and computer applications involving MIDI. Prerequisite: Mus 305. (2)
- 548. PSYCHOLOGY OF MUSIC.** Study of cognitive, emotional, and social aspects of music; acoustics of music and relationship to hearing; and processing of music by the brain. (3)
- 549. MADRIGAL SINGERS.** Rehearsal and performance of literature for small choral ensembles. (1)

**550. MADRIGAL SINGERS.** Rehearsal and performance of literature for small choral ensembles. (1)

**551. ORFF LEVEL I.** An introductory course in the Orff-Schulwerk approach to teaching music in the elementary school. The Orff approach emphasizes creativity through improvisation, movement, the playing of instruments and singing. The course will be taught according to the requirements set forth by the American Orff-Schulwerk Association. (3)

**555. AFRICAN MUSIC ENSEMBLE.** Practical instruction in music and dance traditions of selected Sub-Saharan-African ethnic groups. Introduction to various techniques of drumming, dancing, and singing. (1)

**556. AFRICAN MUSIC ENSEMBLE.** Practical instruction in music and dance traditions of selected Sub-Saharan-African ethnic groups. Introduction to various techniques of drumming, dancing, and singing. (1)

**559. SPECIAL TOPICS IN MUSIC THEORY.** Readings, discussion, and theoretical projects in music theory. May include special analytical approaches, theoretical research, history of music theory, pedagogy of music theory. May be repeated once for credit. (3)

**560. MUSIC THEORY PEDAGOGY.** A comparative survey of current systems and materials for teaching lower-division college courses in music theory and ear training. (3)

**561. SYMPHONIC LITERATURE.** A historical survey of music composed for the orchestra. (3)

**562. ADVANCED CHORAL LITERATURE.** Study of choral literature from the medieval era through the 20th century with regard to historical style, analysis, and performance practice. (3)

**563. CHAMBER MUSIC LITERATURE.** A historical survey of chamber music literature. (3)

**565. INSTRUMENTAL SOLO LITERATURE.** Solo literature for various woodwind, brass, percussion, and string instruments. Emphasis on the standard repertoire and solos used with elementary and secondary school students. (2)

**567. WIND ENSEMBLE.** A lab ensemble for exploration and performance of wind band literature of a variety of periods and genres. (1)

**569. SECONDARY VIOLIN/VIOLA.** The study of performance and pedagogical techniques for violin and viola. For graduate students only. May be repeated once for credit. (2)

**570. SECONDARY CELLO/BASS.** The study of performance and pedagogical techniques for cello and bass. For graduate students only. May be repeated once for credit. (2)

**572. SECONDARY WOODWIND INSTRUMENTS.** Applied minor instrument study. Performance, reed making and adjusting. (May be repeated for credit). All music performance, except class instruction, shall be taught as one hour of private instruction per week. Students may register for only one performance course in an area per semester, that is, only one piano course, or only one voice course, etc. When necessary, music performance courses may be repeated once for credit. The jury shall serve as the final examination for every music performance course. Advancement to the next performance course requires jury recommendation. When offered in a summer term, credit is reduced by half. (2)

**573. SECONDARY WOODWIND INSTRUMENTS.** Applied minor instrument study. Performance, reed making and adjusting. (May be repeated for credit). All music performance, except class instruction, shall be taught as one hour of private instruction per week. Students may register for only one performance course in an area per semester, that is, only one piano course, or only one voice course, etc. When necessary, music performance courses may be repeated once for credit. The jury shall serve as the final examination for every music performance course. Advancement to the next performance course requires jury recommendation. When offered in a summer term, credit is reduced by half. (2)

**574. SECONDARY WOODWIND INSTRUMENTS.** Applied minor instrument study. Performance, reed making and adjusting. (May be repeated for credit). All music performance, except class instruction, shall be taught as one hour of private instruction per week. Students may register for only one performance course in an area per semester, that is, only one piano course, or only one voice course, etc. When necessary, music performance courses may be repeated once for credit. The jury shall serve as the final examination for every music performance course. Advancement to the next performance course requires jury recommendation. When offered in a summer term, credit is reduced by half. (2)

**575. PERSPECTIVES IN WORLD MUSIC.** Cultural, social, and historical dimensions. Emphasis upon music genres related to cultures of Africa, African America, Latin America, Native America, East Asia,



Southeast Asia, Southern Asia, and Southeastern Europe. Prerequisite: Senior or above standing required. (3)

**576. TOPICS IN ETHNOMUSICOLOGY.** An exploration of the cultural, social, historical, technological, and environmental factors that influence the music genres or regional musical traditions selected for study. Students may also explore epistemological themes. (3)

**577. DIASPORIC AFRICAN MUSIC CULTURES.** Exploration of music cultures of Sub-Saharan Africa and related African Diaspora sites, including America, Latin America, the Caribbean, and India. (3)

**582. SECONDARY BRASS INSTRUMENTS.** Applied minor brass instrument study for graduate music students. Emphasis on performance and pedagogical techniques for brass instruments. (May be repeated for credit.) All music performance, except class instruction, shall be taught as one hour of private instruction per week. Students may register for only one performance course in an area per semester, that is, only one piano course, or only one voice course, etc. When necessary, music performance courses may be repeated once for credit. The jury shall serve as the final examination for every music performance course. Advancement to the next performance course requires jury recommendation. When offered in a summer term, credit is reduced by half. (2)

**590. SECONDARY PERCUSSION INSTRUMENTS.** Applied minor percussion instrument study for graduate students. Emphasis on technical development, familiarity with standard pedagogical materials and performance of literature. All music performance, except class instruction, shall be taught as one hour of private instruction per week. Students may register for only one performance course in an area per semester, that is, only one piano course, or only one voice course, etc. When necessary, music performance courses may be repeated once for credit. The jury shall serve as the final examination for every music performance course. Advancement to the next performance course requires jury recommendation. When offered in a summer term, credit is reduced by half. (2)

**592. SECONDARY KEYBOARD INSTRUMENTS.** (2)

**595. OPERA THEATRE WORKSHOP V.** Comprehensive training for the singer-actor in stage and body movement and basic technical training. Performance in scenes recital. (1)

**596. OPERA PRODUCTION WORKSHOP V.** Performance and/or technical training through participation in a fully staged operatic production. (1)

**597. OPERA THEATRE WORKSHOP VI.** Comprehensive training for the singer-actor in stage and body movement and basic technical training. Performance in scenes recital. (1)

**598. OPERA PRODUCTION WORKSHOP VI.** Performance and/or technical training through participation in a fully staged operatic production. (1)

**600. TOPICS IN MUSIC ABROAD.** Students complete departmentally approved course work at a foreign university, music conservatory or institute. May be repeated for a maximum of 6 credit hours with permission of the music department chair. (1-6)

**605. PEDAGOGY OF MUSIC PERFORMANCE I.** Study of methods and materials used in the teaching of music performance, including private and group instruction; concepts of programming; the presentation of literature courses. (2)

**607. WIND BAND LITERATURE.** The development of band literature from 1500 to the present. (3)

**608. ADVANCED KEYBOARD LITERATURE.** A comprehensive study of the major literature of the keyboard. May be repeated for credit. (2)

**613. DIRECTED INDIVIDUAL STUDY.** A comprehensive study of assigned subjects in music. (3)

**614. DIRECTED INDIVIDUAL STUDY.** A comprehensive study of assigned subjects in music. (3)

**615. ADVANCED CONDUCTING.** Baton technique, score study and memorization, analysis of orchestration, rehearsal technique, and program building. (2)

**616. ADVANCED CONDUCTING.** Baton technique, score study and memorization, analysis of orchestration, rehearsal technique, and program building. (2)

**617. OBSERVATION RESEARCH IN MUSIC EDUCATION.** Students engage in the development and use of observation and behavioral research methods. (3)

**618. HISTORICAL RESEARCH IN MUSIC EDUCATION.** Methodology and principles of historical research in music education. Students will learn techniques of historical research and will complete a major research project. (3)

**619. FOUNDATIONS OF MUSIC EDUCATION.** Sequential study of history of American music education and emerging trends in the profession. Study of major philosophies guiding music teaching, including Pestalozzi, Reimer, and the praxial approach of Mark. (3)

**620. RESEARCH IN MUSIC EDUCATION.** An introductory course in methods of research in music education. Types of research examined will include descriptive, historical, philosophical, qualitative, and quantitative. (3)

**622. SEMINAR IN MUSIC EDUCATION.** Current educational principles, methods, materials; application to actual teaching through simulation, action research, discussion, readings in music education literature. (Same as Edse 657). (3)

**623. ADVANCED SONG LITERATURE.** A detailed exploration of advanced topics in song literature. Prerequisite requirements for this course may also be satisfied by equivalent course work as approved by the department. Prerequisite: Mus 303. (2)

**624. ADVANCED OPERA & ORATORIO LITERATURE.** A detailed exploration of advanced topics in opera and oratorio literature. Prerequisite requirements for this course may also be satisfied by equivalent course work as approved by the department. Prerequisite: Mus 304. (2)

**626. MUSIC IN THE ELEMENTARY SCHOOL.** Study and research in methods of implementing the music program in elementary schools. (3)

**627. EXPERIMENTAL RESEARCH IN MUSIC EDU.** This skills-oriented course focuses on the methodology of experimental research in music education. Students will be actively engaged in the selection and implementation of appropriate experimental designs and statistical analyses. (3)

**630. SCHENKERIAN ANALYSIS I.** A study of both the hierarchical relationships in tonal music and the notational system used to represent them, as developed by the 20th century Austrian theorist Heinrich Schenker. Open to theory majors, all others by consent of the instructor. (3)

**652. SECONDARY VOICE.** Applied minor voice study for graduate music students. (2)

**695. PUBLIC RECITAL.** (2)

**697. THESIS.** No grade. (1-12)

**713. INTERNSHIP.** Supervised teaching at the university in preparation for junior college, college, and university responsibilities. (3)

**714. INTERNSHIP.** Supervised teaching at the university in preparation for junior college, college, and university responsibilities. (3)

**797. DISSERTATION.** No grade. (1-18)

## **Ensembles**

Enrollment in any Department of Music Ensemble requires the consent of the instructor.

**527, 528. JAZZ ENSEMBLE.** Standard and new repertory with opportunities for individual improvisation and ensemble jazz experience. (1, 1)

**531, 532. UNIVERSITY ORCHESTRA.** Rehearsal and performance of standard orchestral literature. (2, 2)

**533, 534. UNIVERSITY BAND.** Ole Miss Rebel Marching Band and/or UM Wind Ensemble during the fall semester. UM Wind Ensemble, Symphonic Band, or Concert Band during the spring semester. (2, 2)

**537, 538. INSTRUMENTAL CHAMBER ENSEMBLE.** Chamber music study and performance in appropriate combinations for all instrumentalists. (1 each)

**539, 540. CONCERT SINGERS.** Rehearsal and performance of a variety of musical styles, with emphasis on classical forms. (2, 2)

**541, 542. STEEL DRUM ENSEMBLE.** Rehearsal and performance of traditional Caribbean music, as well as popular, jazz, and classical arrangements for steel drums. (1 each)

- 543, 544. EARLY MUSIC PERFORMANCE ENSEMBLE.** Rehearsal and performance of European vocal and instrumental music before 1750 and related repertoires. (1, 1)
- 545, 546. UNIVERSITY CHORUS.** Rehearsal and performance of works for men's, women's, and mixed chorus. (2, 2)
- 549, 550. MADRIGAL SINGERS.** Rehearsal and performance of literature for small choral ensembles. (1, 1)
- 567. WIND ENSEMBLE.** A lab ensemble for exploration and performance of wind band literature of a variety of periods and genres. (1)
- 593. SUMMER OPERA.** Development of performance techniques specific to music theatre form; movement and gesture, improvisation, musical style and structure, vocal technique, development of listening and ensemble skills. (1)
- 595. OPERA THEATRE WORKSHOP V.** Comprehensive training for the singer-actor in stage and body movement and basic technical training. Performance in scenes recital (1)
- 596. OPERA PRODUCTION WORKSHOP V.** Performance and/or technical training through participation in a fully staged operatic production (1)
- 597. OPERA THEATRE WORKSHOP VI.** Comprehensive training for the singer-actor in stage and body movement and basic technical training. Performance in scenes recital. (1-2)
- 598. OPERA PRODUCTION WORKSHOP VI.** Performance and/or technical training through participation in a fully staged operatic production. (1-2)

All music performance, except class instruction, shall be taught as one hour of private instruction per week. Students may register for only one performance course in an area per semester, that is, only one piano course, or only one voice course, etc. When necessary, music performance courses may be repeated once for credit. The jury shall serve as the final examination for every music performance course. Advancement to the next performance course requires jury recommendation. The student may not continue in the same level of studio lessons or advance to the next level without consent of the instructor and performance area head. When offered in a summer term, credit is reduced by half.

#### **Piano-Pian**

- Pian 521. ADVANCED PIANO I.** Private study for advanced seniors and graduate students. Prerequisite: Pian 422 or audition. (2)
- Pian 522. ADVANCED PIANO II.** Private study for advanced seniors and graduate students. Prerequisite: Pian 521 or equivalent. (2)
- Pian 541. ADVANCED PIANO PERFORMANCE I.** Private study for advanced seniors and graduate students in piano performance. Prerequisite: Pian 442 or audition. (4)
- Pian 542. ADVANCED PIANO PERFORMANCE II.** Private study for advanced seniors and graduate students in piano performance. Prerequisite: Pian 541 or equivalent. (4)
- Pian 592. SECONDARY KEYBOARD INSTRUMENTS.** Applied minor keyboard study for graduate music students. Emphasis on performance and pedagogical techniques on piano, organ or harpsichord. (May be repeated once for credit). (2)
- Pian 621. GRADUATE PIANO I.** Private study for graduate students. Prerequisite: Pian 522 or equivalent. (2)
- Pian 622. GRADUATE PIANO II.** Private study for graduate students. Prerequisite: Pian 621 or equivalent. (2)
- Pian 641. GRADUATE PIANO PERFORMANCE I.** Private study for graduate students in piano performance. Prerequisite: Pian 542 or equivalent. (4)
- Pian 642. GRADUATE PIANO PERFORMANCE II.** Private study for graduate students in piano performance. Prerequisite: Pian 641 or equivalent. (4)

## **Organ — Orgn**

**Orgn 521. ADVANCED ORGAN I.** Private study for advanced seniors and graduate students.

Prerequisite: Orgn 422 or audition. (2)

**Orgn 522. ADVANCED ORGAN II.** Private study for advanced seniors and graduate students.

Prerequisite: Orgn 521 or equivalent. (2)

## **Strings (Violin-Viln, Viola-Vila, Violoncello-Vcel, String Bass-Stbs)**

**Viln 521. ADVANCED VIOLIN I.** Private study for advanced seniors and graduate students. Prerequisite:

Viln 422 or audition. (2)

**Viln 522. ADVANCED VIOLIN II.** Private study for advanced seniors and graduate students.

Prerequisite: Viln 521 or equivalent. (2)

**Viln 541. ADVANCED VIOLIN PERFORMANCE I.** Private study for advanced seniors and graduate students in violin performance. Prerequisite: Viln 442 or audition. (4)

**Viln 542. ADVANCED VIOLIN PERFORMANCE II.** Private study for advanced seniors and graduate students in violin performance. Prerequisite: Viln 541 or equivalent. (4)

**Viln 621. GRADUATE VIOLIN I.** Private study for graduate students. Prerequisite: Viln 522 or equivalent. (2)

**Viln 622. GRADUATE VIOLIN II.** Private study for graduate students. Prerequisite: Viln 621 or equivalent. (2)

**Viln 641. GRADUATE VIOLIN PERFORMANCE I.** Private study for graduate students in violin performance. Prerequisite: Viln 542 or equivalent. (4)

**Viln 642. GRADUATE VIOLIN PERFORMANCE II.** Private study for graduate students in violin performance. Prerequisite: Viln 641 or equivalent. (4)

**Vila 521. ADVANCED VIOLA I.** Private study for advanced seniors and graduate students. Prerequisite: Vila 422 or audition. (2)

**Vila 522. ADVANCED VIOLA II.** Private study for advanced seniors and graduate students. Prerequisite: Vila 521 or equivalent. (2)

**Vila 541. ADVANCED VIOLA PERFORMANCE I.** Private study for advanced seniors and graduate students in viola performance. Prerequisite: Vila 442 or audition. (4)

**Vila 542. ADVANCED VIOLA PERFORMANCE II.** Private study for advanced seniors and graduate students in viola performance. Prerequisite: Vila 541 or equivalent. (4)

**Vila 621. GRADUATE VIOLA I.** Private study for graduate students. Prerequisite: Vila 522 or equivalent. (2)

**Vila 622. GRADUATE VIOLA II.** Private study for graduate students. Prerequisite: Vila 621 or equivalent. (2)

**Vila 641. GRADUATE VIOLA PERFORMANCE I.** Private study for graduate students in viola performance. Prerequisite: Vila 542 or equivalent. (4)

**Vila 642. GRADUATE VIOLA PERFORMANCE II.** Private study for graduate students in viola performance. Prerequisite: Vila 641 or equivalent. (4)

**Vcel 521. ADVANCED VIOLONCELLO I.** Private study for advanced seniors and graduate students. Prerequisite: Vcel 422 or audition. (2)

**Vcel 522. ADVANCED VIOLONCELLO II.** Private study for advanced seniors and graduate students. Prerequisite: Vcel 521 or equivalent. (2)

**Vcel 541. ADVANCED VIOLONCELLO PERFORMANCE I.** Private study for advanced seniors and graduate students in violoncello performance. Prerequisite: Vcel 442 or audition. (4)

**Vcel 542. ADVANCED VIOLONCELLO PERFORMANCE II.** Private study for advanced seniors and graduate students in violoncello performance. Prerequisite: Vcel 541 or equivalent. (4)

**Vcel 621. GRADUATE VIOLONCELLO I.** Private study for graduate students. Prerequisite: Vcel 522 or equivalent. (2)

**Vcel 622. GRADUATE VIOLONCELLO II.** Private study for graduate students. Prerequisite: Vcel 621 or equivalent. (2)

**Vcel 641. GRADUATE VIOLONCELLO PERFORMANCE I.** Private study for graduate students in violoncello performance. Prerequisite: Vcel 542 or equivalent. (4)

**Vcel 642. GRADUATE VIOLONCELLO PERFORMANCE II.** Private study for graduate students in violoncello performance. Prerequisite: Vcel 641 or equivalent. (4)

**Stbs 521. ADVANCED STRING BASS I.** Private study for advanced seniors and graduate students. Prerequisite: Stbs 422 or audition. (2)

**Stbs 522. ADVANCED STRING BASS II.** Private study for advanced seniors and graduate students. Prerequisite: Stbs 521 or equivalent. (2)

**Stbs 541. ADVANCED STRING BASS PERFORMANCE I.** Private study for advanced seniors and graduate students in string bass performance. Prerequisite: Stbs 442 or audition. (4)

**Stbs 542. ADVANCED STRING BASS PERFORMANCE II.** Private study for advanced seniors and graduate students in string bass performance. Prerequisite: Stbs 541 or equivalent. (4)

**Stbs 621. GRADUATE STRING BASS I.** Private study for graduate students. Prerequisite: Stbs 522 or equivalent. (2)

**Stbs 622. GRADUATE STRING BASS II.** Private study for graduate students. Prerequisite: Stbs 621 or equivalent. (2)

**Stbs 641. GRADUATE STRING BASS PERFORMANCE I.** Private study for graduate students in string bass performance. Prerequisite: Stbs 542 or equivalent. (4)

**Stbs 642. GRADUATE STRING BASS PERFORMANCE II.** Private study for graduate students in string bass performance. Prerequisite: Stbs 641 or equivalent. (4)

#### **Woodwinds (Clarinet-Clar, Flute-Flut, Bassoon-Bssn, Oboe-Oboe, Saxophone-Saxn)**

**Clar 521. ADVANCED CLARINET I.** Private study for advanced seniors and graduate students. Prerequisite: Clar 422 or audition. (2)

**Clar 522. ADVANCED CLARINET II.** Private study for advanced seniors and graduate students. Prerequisite: Clar 521 or equivalent. (2)

**Clar 541. ADVANCED CLARINET PERFORMANCE I.** Private study for advanced seniors and graduate students in clarinet performance. Prerequisite: Clar 442 or audition. (4)

**Clar 542. ADVANCED CLARINET PERFORMANCE II.** Private study for advanced seniors and graduate students in clarinet performance. Prerequisite: Clar 541 or equivalent. (4)

**Clar 621. GRADUATE CLARINET I.** Private study for graduate students. Prerequisite: Clar 522 or audition. (2)

**Clar 622. GRADUATE CLARINET II.** Private study for graduate students. Prerequisite: Clar 621 or equivalent. (2)

**Clar 641. GRADUATE CLARINET PERFORMANCE I.** Private study for graduate students in clarinet performance. Prerequisite: Clar 542 or audition. (4)

**Clar 642. GRADUATE CLARINET PERFORMANCE II.** Private study for graduate students in clarinet performance. Prerequisite: Clar 641 or equivalent. (4)

**Flut 521. ADVANCED FLUTE I.** Private study for advanced seniors and graduate students. Prerequisite: Flut 422 or audition. (2)

**Flut 522. ADVANCED FLUTE II.** Private study for advanced seniors and graduate students. Prerequisite: Flut 521 or equivalent. (2)

**Flut 541. ADVANCED FLUTE PERFORMANCE I.** Private study for advanced seniors and graduate students in flute performance. Prerequisite: Flut 442 or audition. (4)

**Flut 542. ADVANCED FLUTE PERFORMANCE II.** Private study for advanced seniors and graduate students in flute performance. Prerequisite: Flut 541 or equivalent. (4)

**Flut 621. GRADUATE FLUTE I.** Private study for graduate students. Prerequisite: Flut 522 or audition. (2)

**Flut 622. GRADUATE FLUTE II.** Private study for graduate students. Prerequisite: Flut 621 or equivalent. (2)

**Flut 641. GRADUATE FLUTE PERFORMANCE I.** Private study for graduate students in flute performance. Prerequisite: Flut 542 or audition. (4)

**Flut 642. GRADUATE FLUTE PERFORMANCE II.** Private study for graduate students in flute performance. Prerequisite: Flut 641 or equivalent. (4)

**Bssn 521. ADVANCED BASSOON I.** Private study for advanced seniors and graduate students. Prerequisite: Bssn 422 or audition. (2)

**Bssn 522. ADVANCED BASSOON II.** Private study for advanced seniors and graduate students. Prerequisite: Bssn 521 or equivalent. (2)

**Bssn 541. ADVANCED BASSOON PERFORMANCE I.** Private study for advanced seniors and graduate students in bassoon performance. Prerequisite: Bssn 442 or audition. (4)

**Bssn 542. ADVANCED BASSOON PERFORMANCE II.** Private study for advanced seniors and graduate students in bassoon performance. Prerequisite: Bssn 541 or equivalent. (4)

**Bssn 621. GRADUATE BASSOON I.** Private study for graduate students. Prerequisite: Bssn 522 or audition. (2)

**Bssn 622. GRADUATE BASSOON II.** Private study for graduate students. Prerequisite: Bssn 621 or equivalent. (2)

**Bssn 641. GRADUATE BASSOON PERFORMANCE I.** Private study for graduate students in bassoon performance. Prerequisite: Bssn 542 or audition. (4)

**Bssn 642. GRADUATE BASSOON PERFORMANCE II.** Private study for graduate students in bassoon performance. Prerequisite: Bssn 641 or equivalent. (4)

**Oboe 521. ADVANCED OBOE I.** Private study for advanced seniors and graduate students. Prerequisite: Oboe 422 or audition. (2)

**Oboe 522. ADVANCED OBOE II.** Private study for advanced seniors and graduate students. Prerequisite: Oboe 521 or equivalent. (2)

**Oboe 541. ADVANCED OBOE PERFORMANCE I.** Private study for advanced seniors and graduate students in oboe performance. Prerequisite: Oboe 442 or audition. (4)

**Oboe 542. ADVANCED OBOE II.** Private study for advanced seniors and graduate students in oboe performance. Prerequisite: Oboe 541 or equivalent. (4)

**Oboe 621. GRADUATE OBOE I.** Private study for graduate students. Prerequisite: Oboe 522 or audition. (2)

**Oboe 622. GRADUATE OBOE II.** Private study for graduate students. Prerequisite: Oboe 621 or equivalent. (2)

**Oboe 641. GRADUATE OBOE PERFORMANCE I.** Private study for graduate students in oboe performance. Prerequisite: Oboe 542 or audition. (4)

**Oboe 642. GRADUATE OBOE PERFORMANCE II.** Private study for graduate students in oboe performance. Prerequisite: Oboe 641 or equivalent. (4)

**Saxn 521. ADVANCED SAXOPHONE I.** Private study for advanced seniors and graduate students. Prerequisite: Saxn 422 or audition. (2)

**Saxn 522. ADVANCED SAXOPHONE II.** Private study for advanced seniors and graduate students. Prerequisite: Saxn 521 or equivalent. (2)

**Saxn 541. ADVANCED SAXOPHONE PERFORMANCE I.** Private study for advanced seniors and graduate students in saxophone performance. Prerequisite: Saxn 442 or audition. (4)

**Saxn 542. ADVANCED SAXOPHONE PERFORMANCE II.** Private study for advanced seniors and graduate students in saxophone performance. Prerequisite: Saxn 541 or equivalent. (4)

**Saxn 621. GRADUATE SAXOPHONE I.** Private study for graduate students. Prerequisite: Saxn 522 or audition. (2)

**Saxn 622. GRADUATE SAXOPHONE II.** Private study for graduate students. Prerequisite: Saxn 621 or equivalent. (2)

**Saxn 641. GRADUATE SAXOPHONE PERFORMANCE I.** Private study for graduate students in saxophone performance. Prerequisite: Saxn 542 or audition. (4)

**Saxn 642. GRADUATE SAXOPHONE PERFORMANCE II.** Private study for graduate students in saxophone performance. Prerequisite: Saxn 641 or equivalent. (4)

**Mus 572, 573, 574. SECONDARY WOODWIND INSTRUMENTS.** Applied minor instrument study. Performance, reed making and adjusting. (May be repeated for credit). (2 each)

**Brass (Baritone-Brtn, French Horn-Frhn, Trumpet-Trpt, Trombone-Trbn, Tuba-Tuba) and Percussion-Perc**

**Brtn 521. ADVANCED BARITONE I.** Private study for advanced seniors and graduate students. Prerequisite: Brtn 422 or audition. (2)

**Brtn 522. ADVANCED BARITONE II.** Private study for advanced seniors and graduate students. Prerequisite: Brtn 521 or equivalent. (2)

**Brtn 541. ADVANCED BARITONE PERFORMANCE I.** Private study for advanced seniors and graduate students in baritone performance. Prerequisite: Brtn 442 or audition. (4)

**Brtn 542. ADVANCED BARITONE PERFORMANCE II.** Private study for advanced seniors and graduate students in baritone performance. Prerequisite: Brtn 541 or equivalent. (4)

**Brtn 621. GRADUATE BARITONE I.** Private study for graduate students. Prerequisite: Brtn 522 or equivalent. (2)

**Brtn 622. GRADUATE BARITONE II.** Private study for graduate students. Prerequisite: Brtn 621 or equivalent. (2)

**Brtn 641. GRADUATE BARITONE PERFORMANCE I.** Private study for graduate students in baritone performance. Prerequisite: Brtn 542 or equivalent. (4)

**Brtn 642. GRADUATE BARITONE PERFORMANCE II.** Private study for graduate students in baritone performance. Prerequisite: Brtn 641 or equivalent. (4)

**Frhn 521. ADVANCED FRENCH HORN I.** Private study for advanced seniors and graduate students. Prerequisite: Frhn 422 or audition. (2)

**Frhn 522. ADVANCED FRENCH HORN II.** Private study for advanced seniors and graduate students. Prerequisite: Frhn 521 or equivalent. (2)

**Frhn 541. ADVANCED FRENCH HORN PERFORMANCE I.** Private study for advanced seniors and graduate students in French horn performance. Prerequisite: Frhn 442 or audition. (4)

**Frhn 542. ADVANCED FRENCH HORN PERFORMANCE II.** Private study for advanced seniors and graduate students in French horn performance. Prerequisite: Frhn 541 or equivalent. (4)

**Frhn 621. GRADUATE FRENCH HORN I.** Private study for graduate students. Prerequisite: Frhn 522 or equivalent. (2)

**Frhn 622. GRADUATE FRENCH HORN II.** Private study for graduate students. Prerequisite: Frhn 621 or equivalent. (2)

**Frhn 641. GRADUATE FRENCH HORN PERFORMANCE I.** Private study for graduate students in French horn performance. Prerequisite: Frhn 542 or equivalent. (4)

**Frhn 642. GRADUATE FRENCH HORN PERFORMANCE II.** Private study for graduate students in French horn performance. Prerequisite: Frhn 641 or equivalent. (4)

**Trpt 521. ADVANCED TRUMPET I.** Private study for advanced seniors and graduate students. Prerequisite: Trpt 422 or audition. (2)

**Trpt 522. ADVANCED TRUMPET II.** Private study for advanced seniors and graduate students. Prerequisite: Trpt 521 or equivalent. (2)

**Trpt 541. ADVANCED TRUMPET PERFORMANCE I.** Private study for advanced seniors and graduate students in trumpet performance. Prerequisite: Trpt 442 or audition. (4)

**Trpt 542. ADVANCED TRUMPET PERFORMANCE II.** Private study for advanced seniors and graduate students in trumpet performance. Prerequisite: Trpt 541 or equivalent. (4)

**Trpt 621. GRADUATE TRUMPET I.** Private study for graduate students. Prerequisite: Trpt 522 or equivalent. (2)

**Trpt 622. GRADUATE TRUMPET II.** Private study for graduate students. Prerequisite: Trpt 621 or equivalent. (2)

**Trpt 641. GRADUATE TRUMPET PERFORMANCE I.** Private study for graduate students in trumpet performance. Prerequisite: Trpt 542 or equivalent. (4)

**Trpt 642. GRADUATE TRUMPET PERFORMANCE II.** Private study for graduate students in trumpet performance. Prerequisite: Trpt 641 or equivalent. (4)

**Trbn 521. ADVANCED TROMBONE I.** Private study for advanced seniors and graduate students. Prerequisite: Trbn 422 or audition. (2)

**Trbn 522. ADVANCED TROMBONE II.** Private study trombone for advanced seniors and graduate students. Prerequisite: Trbn 521 or equivalent. (2)

**Trbn 541. ADVANCED TROMBONE PERFORMANCE I.** Private study for advanced seniors and graduate students in trombone performance. Prerequisite: Trbn 442 or audition. (4)

**Trbn 542. ADVANCED TROMBONE PERFORMANCE II.** Private study for advanced seniors and graduate students in trombone performance. Prerequisite: Trbn 541 or equivalent. (2)

**Trbn 621. GRADUATE TROMBONE I.** Private study for graduate students. Prerequisite: Trbn 522 or equivalent. (2)

**Trbn 622. GRADUATE TROMBONE II.** Private study for graduate students. Prerequisite: Trbn 621 or equivalent. (2)

**Trbn 641. GRADUATE TROMBONE PERFORMANCE I.** Private study for graduate students in trombone performance. Prerequisite: Trbn 522 or equivalent. (4)

**Trbn 642. GRADUATE TROMBONE PERFORMANCE II.** Private study for graduate students in trombone performance. Prerequisite: Trbn 641 or equivalent. (4)

**Tuba 521. ADVANCED TUBA I.** Private study for advanced seniors and graduate students. Prerequisite: Tuba 422 or audition. (2)

**Tuba 522. ADVANCED TUBA II.** Private study for advanced seniors and graduate students. Prerequisite: Tuba 521 or equivalent. (2)

**Tuba 541. ADVANCED TUBA PERFORMANCE I.** Private study for advanced seniors and graduate students in tuba performance. Prerequisite: Tuba 442 or audition. (4)

**Tuba 542. ADVANCED TUBA PERFORMANCE II.** Private study for advanced seniors and graduate students in tuba performance. Prerequisite: Tuba 541 or equivalent. (4)

**Tuba 621. GRADUATE TUBA I.** Private study for graduate students. Prerequisite: Tuba 522 or equivalent. (2)

**Tuba 622. GRADUATE TUBA II.** Private study for graduate students. Prerequisite: Tuba 621 or equivalent. (2)

**Tuba 641. GRADUATE TUBA PERFORMANCE I.** Private study for graduate students in tuba performance. Prerequisite: Tuba 542 or equivalent. (4)

**Tuba 642. GRADUATE TUBA PERFORMANCE II.** Private study for graduate students in tuba performance. Prerequisite: Tuba 641 or equivalent. (4)

**Perc 521. ADVANCED PERCUSSION I.** Private study for advanced seniors and graduate students. Prerequisite: Perc 422 or audition. (2)



**Perc 522. ADVANCED PERCUSSION II.** Private study for advanced seniors and graduate students. Prerequisite: Perc 521 or equivalent. (3)

**Perc 541. ADVANCED PERCUSSION PERFORMANCE I.** Private study for advanced seniors and graduate students in percussion performance. Prerequisite: Perc 442 or audition. (2)

**Perc 542. ADVANCED PERCUSSION PERFORMANCE II.** Private study for advanced seniors and graduate students in percussion performance. Prerequisite: Perc 541 or equivalent. (4)

**Perc 621. GRADUATE PERCUSSION I.** Private study for graduate students. Prerequisite: Perc 522 or equivalent. (2)

**Perc 622. GRADUATE PERCUSSION II.** Private study for graduate students. Prerequisite: Perc 621 or equivalent. (2)

**Perc 641. GRADUATE PERCUSSION PERFORMANCE I.** Private study for graduate students in percussion performance. Prerequisite: Perc 542 or equivalent. (4)

**Perc 642. GRADUATE PERCUSSION PERFORMANCE II.** Private study for graduate students in percussion performance. Prerequisite: Perc 641 or equivalent. (4)

**Mus 582. SECONDARY BRASS INSTRUMENTS.** Applied minor brass instrument study for graduate music students. Emphasis on performance and pedagogical techniques for brass instruments. (May be repeated for credit). (2)

**Mus 590. SECONDARY PERCUSSION INSTRUMENTS.** Applied minor percussion instrument study for graduate students. Emphasis on technical development, familiarity with standard pedagogical materials and performance of literature. (2)

#### **Voice-Voice**

**521. ADVANCED VOICE I.** Private study for advanced seniors and graduate students. Prerequisite: Voic 422 or audition. (2)

**522. ADVANCED VOICE II.** Private study for advanced seniors and graduate students. Prerequisite: Voic 521 or equivalent. (2)

**523. ADVANCED COACHING I.** Private coaching for advanced seniors and graduate students in voice performance. Prerequisite: consent of instructor. (1)

**524. ADVANCED COACHING II.** Private coaching for advanced seniors and graduate students in voice performance. Prerequisite: consent of instructor. (1)

**541. ADVANCED VOICE PERFORMANCE I.** Private study for advanced seniors and graduate students in voice performance. Prerequisite: Voic 442 or audition. (4)

**542. ADVANCED VOICE PERFORMANCE II.** Private study for advanced seniors and graduate students in voice performance. Prerequisite: Voic 541 or equivalent. (4)

**621. GRADUATE VOICE I.** Private study for graduate students. Prerequisite: Voic 522 or equivalent. (2)

**622. GRADUATE VOICE II.** Private study for graduate students. Prerequisite: Voic 621 or equivalent. (2)

**641. GRADUATE VOICE PERFORMANCE I.** Private study for graduate students in voice performance. Prerequisite: Voic 542 or equivalent. (4)

**642. GRADUATE VOICE PERFORMANCE II.** Private study for graduate students in voice performance. Prerequisite: Voic 641 or equivalent. (4)

**652. SECONDARY VOICE.** Applied minor voice study for graduate music students. (2)

#### **PHILOSOPHY AND RELIGION**

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Associate Professor Steven C. Skultety, chair • Bryant Hall  
<http://www.olemiss.edu/depts/philosophy/>

Overview: The Department of Philosophy and Religion offers a minor in philosophy, a minor in religious studies, a Bachelor of Arts (B.A.) in philosophy, a B.A. in religious studies, and a Master of Arts (M.A.) in philosophy.

### **M.A. in Philosophy**

Description: The M.A. in philosophy prepares a student to go on to a Ph.D. program, a professional school, theology graduate work, or simply to provide further education in philosophy before pursuing a career.

Admission Requirements • In addition to meeting Graduate School requirements, prospective students should normally show a major in philosophy or at least 18 semester hours of undergraduate philosophy courses. The graduate faculty of the department will make a decision concerning admission after reviewing an applicant's academic records, recommendations, and other relevant factors.

Course Requirements: The M.A. in philosophy can be completed as either a thesis or nonthesis option. The thesis option requires 24 semester hours of graduate-level course work and 6 semester hours of thesis work. The nonthesis option requires 36 semester hours of course work.

### **Other Academic Requirements**

Thesis Option: Students should submit a one- or two-page thesis prospectus to the departmental graduate faculty by no later than the middle of their third semester. Upon approval of the prospectus and in discussion with the candidate, the faculty will select a director and two other graduate faculty to serve as the thesis committee. The thesis director will be the student's primary adviser and liaison with the graduate school and, together with the other two members of the thesis committee, will evaluate the thesis and the oral examination. Prior to the oral defense of the thesis, the student must have completed the written M.A. comprehensive examination and the exit questionnaire.

Nonthesis Option: Students electing the nonthesis option must select their course work in consultation with and with the consent of the graduate adviser. During the third semester of graduate work, the student will notify the director of graduate studies of his or her intent to submit a paper to the graduate faculty. Upon approval of the director and in discussion with the candidate, the faculty will select three graduate faculty to hear the paper presentation. The director will be the student's primary adviser and liaison with the Graduate School and, together with the other two members of the committee, will evaluate the paper and the oral examination. Prior to the oral defense of the paper, the student must have completed the written M.A. comprehensive examination and the exit questionnaire.

### **Philosophy-Phil**

**502. PHILOSOPHY IN THE UNITED STATES.** Survey of American philosophy from colonial times to the present. (3)

**503. SEMINAR.** Selected topics. Content varies. (3)

**506. CONTEMPORARY POLITICAL PHILOSOPHY.** Philosophical issues in recent political thought. (3)

**511. PHILOSOPHY OF SCIENCE.** Survey of philosophical issues in scientific theory and practice, including the nature of scientific method and explanation. (3)

**516. CONTEMPORARY ETHICAL THEORY.** Recent ethical and metaethical theories and issues: e.g., the nature of morality, relativism, the relation of ethics to law and religion. (3)

**518. CONTEMP THEORIES: PHILOSOPHY OF RELIGION.** Recent work in the philosophy of religion, such as process thought, Eastern religion, and religious epistemology. (3)

**519. PHILOSOPHY OF LANGUAGE.** Survey of major philosophical problems in language, including meaning, reference, relations of language to thought and being. (Same as Ling 519). (3)

- 520. PROBLEMS IN ENVIRONMENTAL ETHICS.** Selected problems, such as population dynamics, ecosystem disruption, and environmental rights. (3)
- 521. CONTEMPORARY PHILOSOPHY.** Recent developments in philosophy. (3)
- 600. KANT.** An intensive study of the Critique of Pure Reason. (3)
- 602. WITTGENSTEIN.** An examination of Wittgenstein's philosophy with emphasis on his later period. (3)
- 607. MAJOR WESTERN PHILOSOPHERS.** One or more classical thinkers such as Plato, Aristotle, Leibniz, Hume, Kant, Hegel. (May be repeated for credit). (1-3)
- 609. STUDIES IN EXISTENTIAL PHILOSOPHY.** Basic works and themes in existentialism, centering on the fundamental philosophical questions as they are raised in Hebrew and Greek thought, synthesized in Christian thought, and examined by the existentialist philosophers. (3)
- 611. PROBLEMS OF METAPHYSICS.** Selected issues in theories of reality. May be repeated for credit. (3)
- 613. PROBLEMS IN THE PHILOSOPHY OF RELIGION.** Topics selected in accordance with needs and backgrounds of students. (1-3)
- 615. RESEARCH.** May be repeated for credit. (1-3)
- 616. RESEARCH.** (May be repeated for credit.). (1-3)
- 617. PROBLEMS OF EPISTEMOLOGY.** Selected issues in theories of knowledge. May be repeated for credit. (3)
- 619. VALUE THEORY.** An examination of the nature and purpose of values in classical and contemporary thought. (3)
- 620. PROBLEMS OF AESTHETICS.** An examination of the leading views, issues, and concepts in the philosophy of art. (3)
- 621. PROBLEMS IN ETHICS.** An examination of the metaethical questions about the epistemology, metaphysics, and semantics of ethics, as well as normative questions raised by major ethical theories. (3)
- 628. PROBLEMS IN BIOMEDICAL ETHICS.** A consideration of basic issues in medical ethics from the perspective of the philosophical conception of ethics and the human person. (3)
- 631. PROBLEMS IN POLITICAL PHILOSOPHY.** Addresses the justification of a state and examines various classical liberal, and conservative ideals of the state. (3)
- 650. PROBLEMS OF PHILOSOPHY OF LAW.** An examination of classical and contemporary problems in legal philosophy. (3)
- 655. ADVANCED SYMBOLIC LOGIC.** Advanced approaches to deductive symbolic logic. Topics covered include propositional logic, quantificational logic, and modal logic. (Same as Ling 655). (3)
- 697. THESIS.** No grade. (1-12)

#### **Religion-Rel**

- 501. SEMINAR.** Selected topics. Content varies. (3)
- 613. TOPICS IN RELIGIOUS STUDIES.** An investigation of a specialized topic in religious studies. Content varies. May be repeated for credit. (3)

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#### **PHYSICS AND ASTRONOMY**

Professor Lucien Cremaldi, chair • 108 Lewis Hall

[http://www.olemiss.edu/depts/physics\\_and\\_astronomy/](http://www.olemiss.edu/depts/physics_and_astronomy/)

Overview: The Department of Physics and Astronomy offers the minor, Bachelor of Arts (B.A.), and Bachelor of Science (B.S.) degrees in physics. At the graduate level, the department offers the Master of Arts (M.A.), Master of Science (M.S.), and Doctor of Philosophy (Ph.D.) in physics.

Preliminary Requirements: Thirty semester hours of acceptable undergraduate study in physics and mathematics through differential equations are usually required for admission to graduate study. New graduate students should obtain a set of departmental rules for examinations. These rules apply to all graduate degrees offered by the department.

### **M.A. in Physics**

Description: Graduate work in physics is planned primarily to meet the needs of students who are looking forward to professional careers in physics, either as teachers or as research physicists. The M.A. degree does not require a thesis; it is based on graduate class work and an oral examination.

Course Requirements: The M.A. in physics requires 30 hours of suitable graduate course work, at least 15 hours of which must consist of graduate course work in physics at the 600 level.

Other Academic Requirements: Students are required to participate in the teaching of physics lectures or laboratories as part of their graduate training.

### **M.S. in Physics**

Description: Graduate work in physics is planned primarily to meet the needs of students who are looking forward to professional careers in physics, either as teachers or as research physicists. The M.S. degree requires a thesis project based on original research.

Course Requirements: The M.S. in physics requires 24 hours of suitable graduate course work and 6 hours of thesis (Phys 697). At least 12 hours of the graduate course work must consist of courses in physics at the 600 level.

Other Academic Requirements: Students are required to participate in the teaching of physics lectures or laboratories as part of their graduate training.

### **Ph.D. in Physics**

Description: Graduate work in physics is planned primarily to meet the needs of students who are looking forward to professional careers in physics, either as teachers or as research physicists.

Course Requirements: In addition to the general Graduate School requirements, candidates for the Ph.D. must complete a minimum of 54 credit hours of graduate course work, including 18 hours of Phys 797 and 36 required classroom hours as described below, exclusive of thesis credit (Phys 697), in a program approved by the student's advisory committee. Core courses consisting of Thermodynamics and Statistical Mechanics (Phys 627), Advanced Mechanics (Phys 609), Quantum Mechanics (Phys 611, 612), Atomic and Nuclear Physics (Phys 607), Solid State Physics (Phys 625), and Advanced Electromagnetic Theory (Phys 621, 622) are required of all candidates. Of the 36 required classroom hours, up to six hours may be taken in a related field such as mathematics, chemistry, or engineering. A total of 30 hours of credit must be in physics courses at the 600 level.

Other Academic Requirements: The preliminary examination shall cover the following fields: classical and quantum mechanics, thermodynamics, optics, electricity and magnetism, modern physics, and experimental physics.

The comprehensive examination has both written and oral components. The written part consists of three three-hour examinations as follows: 1) quantum mechanics; 2) classical mechanics, thermodynamics, and statistical mechanics; 3) electromagnetic theory. The oral part of the exam can be taken only after the written part has been passed.

## Physics-Phys

- 501. INTERMEDIATE ELECTROMAGNETIC THEORY I.** Electrostatics, electric and magnetic properties of matter. Maxwell's equations and their solution, propagation and radiation of electromagnetic waves. Students cannot receive credit for both Phys 402 and Phys 502. (3)
- 502. INTERMEDIATE ELECTROMAGNETIC THEORY II.** Electrostatics, electric and magnetic properties of matter, Maxwell's equations and their solutions, propagation and radiation of electromagnetic waves. Students can not receive credit for both Phys 402 and Phys 502. Prerequisite: Phys 501. (3)
- 503. SELECTED TOPICS IN PHYSICS I.** May be repeated for credit up to 9 hours. (1-3)
- 507. DIRECTED RESEARCH.** Guided experimental work for the development of research laboratory skills. Cannot be used for degree credit. May be repeated for credit. Z grade. (1-3)
- 510. RESEARCH SEMINAR.** Philosophy and principles of modern physics research. May be repeated for credit. Z grade. (1)
- 521. ACOUSTICS.** Mathematical description of sound propagation with various boundary conditions. (Same as Engr 515). Prerequisite: Phys 402 or Graduate Status. (3)
- 522. ACOUSTICS LABORATORY.** A laboratory course to complement an acoustics lecture course; emphasis on a study of wave phenomena and acoustical measurements. Corequisite: Phys 521. Prerequisite: Phys 521 or Graduate Status. (1)
- 532. ADVANCED ACOUSTICS LABORATORY.** Advanced laboratory projects in acoustics involving experiments in sound measurement and analysis, vibration, transducers, architectural and underwater acoustics. Prerequisite: Phys 521 with minimum grade of C. (3)
- 533. SURVEY OF TOPICS IN PHYSICS I.** Topics of special interest to teachers of life and physical sciences. Not applicable to a professional degree in physics. Prerequisite: Instructor Approval Required. (3)
- 534. SURVEY OF TOPICS IN PHYSICS II.** Topics of special interest to teachers of life and physical sciences. Not applicable to a professional degree in physics. Prerequisite: Phys 533. (3)
- 551. MATHEMATICAL METHODS OF PHYSICS I.** Mathematical aspects of the theoretical formulation of classical and modern physics. Prerequisite: Phys 308 or Graduate Status. (3)
- 552. MATHEMATICAL METHODS OF PHYSICS II.** Mathematical aspects of the theoretical formulation of classical and modern physics. Prerequisite: Phys 551. (3)
- 605. ADVANCED ACOUSTICS.** Advanced course in theoretical acoustics. The course will treat the acoustic wave equations for a variety of actual physical situations. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Phys 521 with minimum grade of C. (3)
- 607. ATOMIC AND NUCLEAR PHYSICS.** . Prerequisite: Phys 451. (3)
- 609. ADVANCED MECHANICS I.** Newtonian mechanics, Lagrangian dynamics, small oscillations, rigid body motion. Hamiltonian dynamics, waves, continuum mechanics, classical field theory. Prerequisite: Phys 310. (3)
- 610. ADVANCED MECHANICS II.** Continuation of Advanced Mechanics I. Prerequisite: Phys 609 with minimum grade of C. (3)
- 611. QUANTUM MECHANICS I.** Schrodinger's equation and Hilbert spaces. Symmetry and conservation laws. Path integral quantization. Quantum theory of angular momentum. Systems of identical particles and many-electron atoms. Perturbation theory. Nonrelativistic scattering. Corequisite: Phys 609. (3)
- 612. QUANTUM MECHANICS II.** Continuation of Quantum Mechanics I. Prerequisite: Phys 611 with minimum grade of C. (3)
- 617. MODERN PHYSICS I.** Special relativity and quantum mechanics; applications to atomic and nuclear physics, particle physics, and solid state physics. (3)
- 618. MODERN PHYSICS II.** Continuation of Modern Physics I. Prerequisite: Phys 617. (3)
- 621. ADVANCED ELECTROMAGNETIC THEORY I.** Electromagnetic waves, scattering and dispersion, and advanced boundary value problems. Corequisite: Phys 609. (3)

- 622. ADVANCED ELECTROMAGNETIC THEORY II.** Continuation of Advanced Electromagnetic Theory I. Prerequisite: Phys 621. (3)
- 623. INTRODUCTION TO NUCLEAR PHYSICS I .** Prerequisite: Math 454. (3)
- 624. INTRODUCTION TO NUCLEAR PHYSICS II.** Continuation of Nuclear Physics I. Prerequisite: Phys 623 with minimum grade of C. (3)
- 625. SOLID STATE PHYSICS I.** Properties of solids and solid state theory, lattices, lattice imperfections and vibrations, cohesive energy, band structure, magnetism, transport and optical properties. Corequisite: Phys 611. (3)
- 626. SOLID STATE PHYSICS II.** Continuation of Solid State Physics I. Prerequisite: Phys 625. (3)
- 627. ADV THERMODYNAMICS/STATISTICAL MECH I.** Theory and applications of the laws of thermodynamics and statistical mechanics from the classical and quantum viewpoints. Corequisite: Phys 611. (3)
- 628. ADV THERMODYNAMICS/STATISTICAL MECH II.** Continuation of Advanced Thermodynamics and Statistical Mechanics I. Prerequisite: Phys 627 with minimum grade of C. (3)
- 629. SELECTED TOPICS IN PHYSICS I.** Topics of current interest, both experimental and theoretical. (1-3)
- 630. SELECTED TOPICS IN PHYSICS II.** Topics of current interest, both experimental and theoretical. Prerequisite: Instructor Approval Required. (1-3)
- 631. QUANTUM FIELD THEORY I.** Quantized relativistic fields. QED. Renormalization. Gauge fields. Spontaneous symmetry breaking. Electroweak interactions. QCD. (3)
- 632. QUANTUM FIELD THEORY II.** Continuation of Quantum Field Theory I. Prerequisite: Phys 631. (3)
- 633. ELEMENTARY PARTICLE PHYSICS.** Phenomenology. Symmetries and conservation laws. Quarks, leptons, gauge bosons. Standard model. Experimental techniques of particle physics. Prerequisite: Phys 612, Phys 451 or Graduate Status. (3)
- 634. ELECTRONICS IN RESEARCH.** (1-3)
- 636. ADVANCED PHYSICAL OPTICS.** (3)
- 697. THESIS RESEARCH IN PHYSICS.** No grade. (1-12)
- 797. DISSERTATION.** No grade. (1-18)

## **POLITICAL SCIENCE — POL**

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Associate Professor John M. Bruce, chair • 133 Deupree Hall  
[http://www.olemiss.edu/depts/political\\_science/](http://www.olemiss.edu/depts/political_science/)

Overview: The Department of Political Science offers a minor and Bachelor of Arts (B.A.), Master of Arts (M.A.), and Doctor of Philosophy (Ph.D.) degrees in political science.

### **M.A. in Political Science**

Description: The M.A. degree provides students with an intensive study of the different fields, theories, and research methods in contemporary political science. The degree prepares students for doctoral study in political science, and for careers in education, government, or policy analysis. Two options are offered: One, which requires a written thesis, is for students primarily interested in political science research; the other, which replaces the thesis with a written comprehensive examination, is for students who are more concerned with the practical application of their political science expertise.

Preliminary Requirements: All applicants should hold at least a bachelor's degree from an accredited institution, have a competitive undergraduate grade-point average, and have earned competitive scores on the verbal and quantitative sections of the Graduate Record Examination (GRE). Applicants for whom

English is not the native language must demonstrate linguistic proficiency suitable for graduate-level study by achieving a minimum score of 550 on the Test of English as a Foreign Language (TOEFL). Applicants also must submit three letters of recommendation, a writing sample, and a brief essay outlining their substantive interests in political science (for example, American politics and judicial behavior) and the career goals for which a graduate degree will prepare them. Fulfilling the minimum standard is not a guarantee of admission.

**Course Requirements:** The M.A. in political science can be completed as either a thesis or nonthesis program.

**Thesis Option:** Thirty graduate-level semester hours, including 6 hours of methods/tools courses (Pol 550, 551) and a thesis carrying 6 credit hours constitute the minimum requirement. Each candidate for the M.A. must pass an oral examination after the other requirements for the degree have been fulfilled. The examination may include the student's course work as well as the thesis. All requirements for the M.A. degree normally must be completed within four years from the date of enrollment.

**Nonthesis Option:** Thirty graduate-level semester hours, including 6 hours of methods/tools courses (Pol 550, 551) and a written comprehensive examination in the student's major subfield constitute the minimum requirement. Each candidate for the M.A. must pass an oral examination after the other requirements for the degree have been fulfilled. The examination may include the student's course work as well as the written examination. All requirements for the M.A. degree normally must be completed within four years from the date of enrollment.

### **Ph.D. in Political Science**

**Description:** The Ph.D. degree provides students with an intensive knowledge and research skills for practicing contemporary political science. The objective of the degree is to prepare students for careers as political scientists in university, community college, government, or research settings.

**Preliminary Requirements:** Applicants to the Ph.D. program must submit three letters of recommendation, a statement of purpose outlining their substantive interests in political science (for example, comparative politics and developing nations), and a writing sample. They also must hold at least a bachelor's degree from an accredited institution, have a competitive grade-point average, and have earned competitive scores on the verbal and quantitative sections of the Graduate Record Examination (GRE). All students for whom English is not the native language must demonstrate proficiency in English by achieving a minimum score of 550 on the Test of English as a Foreign Language (TOEFL). Fulfilling the minimum admission standards is not a guarantee of admission.

**Course Requirements:** A student enrolled in the doctoral program will be admitted to candidacy when the following requirements have been satisfied: (1) a minimum of 54 semester hours of graduate-level course work in political science have been completed, including course work for the M.A. (done at the University of Mississippi or elsewhere), but excluding credit for the thesis or internship; (2) the methodology requirement has been met; and (3) the written and oral portions of the comprehensive examination have been passed. Each student working for the Ph.D. is required to complete three semesters of methods/tools courses, including Pol 550, Pol 551, and Pol 552.

Each student working for the Ph.D. is required to take a comprehensive examination consisting of two parts, one written and one oral. The written examination shall cover both the student's major field and minor field. The oral portion of the examination will be a rigorous, comprehensive test of the student's knowledge of the discipline of political science with special emphasis on the selected subfields.

Both a dissertation prospectus and a dissertation exhibiting original research and demonstrating mature scholarship and critical judgment, as well as familiarity with the tools and methods of research, are required.

### **Political Science-Pol**

**500. SEMINAR IN AMERICAN POLITICS.** An orientation to the major literature on American politics that introduces students to major conceptual and theoretical issues in the field. (3)

**523. THEORIES OF COMPARATIVE POL ANALYSIS.** Examination of the major empirical concepts of comparative politics and their use in theory construction for the analysis of politics within societies. (3)

**531. SEMINAR IN INTERNATIONAL RELATIONS.** Theories and problems in international relations. (3)

**550. RESEARCH IN POLITICS.** Introduction to the philosophy and practice of research in political science. (3)

**551. EMPIRICAL POLITICAL ANALYSIS.** Introduction to elements of probability, statistics, and bivariate regression in political science. (3)

**552. APPLIED POLITICAL RESEARCH.** Hypothesis testing and inference using the general linear model. (3)

**598. SPECIAL TOPICS IN POLITICAL SCIENCE.** Study of specialized topics in the discipline. (May be repeated once for credit). (3)

**601. SEMINAR IN JUDICIAL BEHAVIOR.** An analysis of judicial decision making, its influences and impact, in trial and appellate courts in state and federal systems. (3)

**602. SEMINAR IN JUDICIAL POLITICS.** Problems in constitutional law; theories of judicial activism versus restraint; legal and political philosophies of Supreme Court justices; methods of judicial rationalization; judicial elitism. (3)

**603. SEMINAR IN AMERICAN LEGISLATIVE POLITICS.** An examination of the academic literature on the U.S. Congress, focusing on classic studies and advanced methods, with an emphasis on preparing students for original research in the field. (3)

**604. SEMINAR IN EXECUTIVE POLITICS.** Examination of the presidency and other chief executive offices analyzing functions, powers, and relations with other political institutions; both historical and comparative analysis. (3)

**606. SEMINAR IN MEDIA POLITICS.** An examination of the role and function of the media in American national politics, the theories used to explain that role, and the methodologies used to test those theories. (3)

**609. SEMINAR IN SOUTHERN POLITICS.** Analysis of Southern politics that focuses on the region's unique political history, its transformation during the 20th century, and its importance to national politics. (3)

**612. SEMINAR IN AMERICAN POLITICAL PARTIES.** An examination of issues related to the study of political parties, especially as linkage institutions between citizens and elites. (3)

**613. SEMINAR IN STATE POLITICS AND POLICY.** An examination of issues related to the study of state politics and policy in the United States with a focus on the study of states as laboratories for public policy and for the empirical examination of political institutions and behavior. (3)

**614. SEMINAR IN POL PARTICIPATION & VOTING.** An examination of the determinants of mass political behavior. Primary focus on the act of voting and forces shaping the vote decision. (3)

**615. SEMINAR IN PUBLIC OPINION & POL PSY.** An examination of the key concepts and literature in the broad and multidisciplinary field of public opinion. (3)

**620. SEMINAR IN ADVANCED INDUSTRIAL SOCIETIES.** Major theories and issues concerning politics in advanced industrial societies, including Western Europe, Japan, Australia, the United States, and Canada. (3)

**621. SEMINAR IN EUROPEAN COMPARATIVE GOV.** Theories and problems in European comparative government. (3)



- 622. SEMINAR IN POL DEV & CHANGE.** Intensive examination of the provocative concepts and theories in the area of political development and change. (3)
- 623. REGIME CHANGE AND DEMOCRATIZATION.** Theories and analysis of transitions to and from democracy. (3)
- 624. SEMINAR IN ASIAN GOVERNMENT.** Theories and problems specific to Asian societies and politics. (3)
- 625. REFORM IN POST-COMMUNIST COUNTRIES.** This course examines the theoretical foundations of Communist systems both as political entities and as a subfield in comparative politics. (3)
- 626. COMPARATIVE BUREAUCRACIES.** A comparative look at state structures and relationships, focusing on the policy process and bureaucracy. Prerequisite: Pol 523. (3)
- 627. COMPARATIVE LEGISLATURES.** Comparative study of some of the important structures, functions, and processes of legislatures and legislative-like institutions in both Western and non-Western societies. (3)
- 628. SEMINAR IN COMP PARTIES & ELECTIONS.** An examination of political parties, party systems, and elections worldwide. (3)
- 632. QUANT. APPROACHES TO INT'L RELATIONS.** Mathematical techniques currently applied to the study of international politics. Statistical and game-theoretic models will be explored, with special emphasis on quantitative cross-national foreign policy analysis. (3)
- 633. GLOBAL STRATEGY AND ALLIANCES.** Examination of block behavior and alliances in international politics. (3)
- 634. FORMULATION OF AMERICAN FOREIGN POLICY.** The mechanisms and institutions involved in foreign policy formulation, including the impact and interaction of both governmental and nongovernmental groups. Covers the various modes of influence utilized in foreign policy and the current behavioral literature relevant to the policy-making process. (3)
- 635. INTERNATIONAL CONFLICT.** Analysis of the causes, duration, resolution, and outcomes of interstate wars. (3)
- 636. INTERNATIONAL SECURITY LAW AND POLICY.** This course explores the complexities of the international law of conflict management and the legal structure for resolving international disputes. (3)
- 637. SEMINAR IN INT'L POLITICAL ECONOMY.** An introduction to the major theoretical, historical, and current policy issues in international political economy, including the politics of international trade, monetary, and investment relations. (3)
- 639. INT'L ORGANIZATIONS AND COOPERATION.** Analysis of state cooperation in an anarchic international system and the use of formal international organizations by states. (3)
- 641. SEMINAR IN LATIN AMER COMPARATIVE GOV.** Theories and issues concerning politics and government with specific focus on Latin America. (3)
- 642. QUANTITATIVE APPROACHES TO COMP POL.** Theoretical empirical approaches to the study of comparative politics in an applied setting using quantitative methodologies. (3)
- 653. ADVANCED TOPICS IN POLITICAL METHODOLOGY.** Advanced topics in political methodology, such as systems of equations, time series analysis, and limited dependent variables. (3)
- 654. FORMAL MODELS OF POLITICS.** An introduction to formal models of politics, including topics such as individual rationality and introductory game theory, collective choice theory, spatial models, voting games, and coalitional rationality. (3)
- 691. SEMINAR IN TEACHING.** Description of pedagogy of political science. The first part of the course deals with philosophical issues, goals, and approaches. The second part focuses on mechanics of good teaching. Z grade. (1)
- 695. RESEARCH PRACTICUM.** Original research applying social science research methods guided by a faculty adviser. May be repeated once for credit. (3)
- 696. ADVANCED READINGS.** Self-directed readings for advanced graduate students preparing for comprehensive exams. May be repeated twice for credit. Z grade. (3)
- 697. THESIS.** No grade. (1-12)

**698. SPECIAL TOPICS IN POLITICAL SCIENCE.** Study of specialized topics in the discipline. May be repeated for credit. (3)

**699. READINGS/RESEARCH.** Independent research. May be repeated once for credit. Prerequisite: Consent of Department Chairperson Required. (3)

**796. DISSERTATION PROSPECTUS.** Students outline the central research question(s), relate the proposed dissertation to the existing literature, detail a research methodology, and explain the nature of the original contribution that the completed project will provide. Z grade. (1-6)

**797. DISSERTATION.** No grade. (1-18)

## **PSYCHOLOGY — PSY**

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Professor Michael T. Allen, chair • 205A Peabody Hall

<http://www.olemiss.edu/depts/psychology/>

**Overview:** The Department of Psychology offers a Bachelor of Arts (B.A.) program and minor at the undergraduate level. Graduate-level programs are the Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) in psychology. The Ph.D. in psychology has emphases in clinical and experimental psychology.

**Accreditation:** The American Psychological Association (APA) is the accrediting body for the doctoral program in clinical psychology, which is fully accredited. The APA does not accredit doctoral programs in experimental psychology.

**Preliminary Requirements:** Applicants to the graduate programs in psychology must have completed a baccalaureate degree at an accredited institution and must have successfully completed a minimum of 12 semester hours of psychology courses. Undergraduate course work should include general psychology, psychological statistics, and at least one laboratory course. Additional course work in physiological psychology, abnormal psychology, developmental psychology, and some other course work in biology, physiology, and/or chemistry is preferred. In addition to Graduate School requirements, three letters of recommendation and a statement of their reasons for pursuing a graduate degree at the University of Mississippi are required. Applicants for admission are considered only once each year. All application materials must be received by December 1 for consideration for admission the following August.

**Additional Information:** The Department of Psychology does not offer the M.A. degree as a terminal degree. All graduate students must be accepted into the Ph.D. program and may receive the M.A. as one step in the doctoral program.

### **M.A. in Psychology**

**Description:** The Department of Psychology does not offer a terminal master's degree. All graduate students must be accepted into the Ph.D. program and may receive the M.A. as one step in the doctoral program.

**Course Requirements:** Completion of the M.A. degree is determined by a recommendation from the student's advisory committee.

### **Ph.D. in Psychology**

**Description:** The Ph.D. in psychology is offered as either an emphasis in experimental psychology or clinical psychology. A Ph.D. in experimental psychology prepares an individual for an academic position in psychology, or as a research scientist in a nonacademic setting. Students specialize in behavioral neuroscience, cognitive psychology, developmental psychology, or social psychology. The Ph.D. in clinical

psychology is designed to prepare an individual to become a professional psychologist capable of working in clinical or research settings.

Course Requirements: The Ph.D. degree must be completed by fulfilling the requirements for either the emphasis in experimental psychology or clinical psychology.

#### **Emphasis in Experimental Psychology**

Description: A Ph.D. in experimental psychology prepares an individual for an academic position in psychology, or as a research scientist in a nonacademic setting. Students specialize in behavioral neuroscience, cognitive psychology, developmental psychology, or social psychology.

Course Requirements: Students must complete the following courses: Psy 603, Psy 604, Psy 617, and Psy 648; Psy 655 every semester; four courses from the six core courses of Psy 505, 607, 612, 615, 618 or 651; two other departmental courses, excluding Psy 647, Psy 697, and Psy 797.

#### **Emphasis in Clinical Psychology**

Description: The Ph.D. in clinical psychology is designed to prepare an individual to become a professional psychologist capable of working in clinical or research settings.

Course Requirements: Students must complete the following courses: Psy 505, 603, 604, 610, 611, 621, 622, 629, 631, 641, 648; one course in each of the following areas: physiological psychology, developmental psychology, cognitive psychology, social psychology; and three elective classes. Additionally, students must complete two semesters each of Psy 624, 625, 626, and 628.

#### **Psychology-Psy**

**505. CONDITIONING AND LEARNING.** The general field of human and animal learning, including instrumental conditioning, classical conditioning, memory, and transfer. Prerequisite: 12 hours of PSY courses. (3)

**511. THE NEURAL BASIS OF LEARNING & MEMORY.** The course will focus on habituation in the Aplysia; classical conditioning and the cerebellum; theories of hippocampal function-- animal studies; temporal lobe amnesia in humans; memory impairments associated with Alzheimer's and Huntington's disease. (3)

**519. GROUP DYNAMICS.** Factors affecting political and social efficiency. Prerequisite: Psy 321. (3)

**530. SINGLE SUBJECT & SM GRP RESEARCH DESIGN.** Prerequisite: Psy 505, 12 hours of PSY courses. (3)

**531. SENSATION AND PERCEPTION.** A survey of classical psychophysical methods, signal detection theory, and sensory psychophysiology. Prerequisite: 12 hours of PSY courses. (3)

**532. ATTENTION AND CONSCIOUSNESS.** The seminar explores the nature and underlying mechanisms of attention and consciousness. Topics include theories of attention and consciousness, attention and duration judgment, philosophical perspective on consciousness, subliminal perception, implicit learning, and animal consciousness. Prerequisite: Instructor Approval Required. (3)

**541. INTELLECTUAL DISABILITY & DEV. DISORDERS** Structural aspects of reduced function including genetic, glandular, neurological, and psychological considerations. Prerequisite: 12 hours of PSY courses. (3)

**553. THEORIES OF LEARNING.** Theories of Thorndike, Pavlov, Guthrie, Skinner, Hull, and Tolman. Prerequisite: 12 hours of PSY courses. (3)

**561. CROSS-CULTURAL TRAINING.** The course will survey cross-cultural training programs designed to introduce people from one cultural background to ways of interacting effectively in a culture other than their own. (3)

**575. PSYCHOSOCIAL ASPECTS OF AGING.** Introduction to gerontology with a foundation in biological, psychosocial, and behavioral aspects of aging; emphasis on current research and experience working with older adults. (Same as SW 575). (3)

**601. SEMINAR.** New developments in psychology. May be repeated for credit. (3)

**603. QUANTITATIVE METHODS IN PSYCHOLOGY I.** Topics treated are descriptive statistics, probability theory, hypothesis testing, linear regression, analysis of variance, experimental design, nonparametric and multivariate techniques, and computer applications. (3)

**604. QUANTITATIVE METHODS IN PSYCHOLOGY II.** Topics treated are descriptive statistics, probability theory, hypothesis testing, linear regression, analysis of variance, experimental design, nonparametric and multivariate techniques, and computer applications. Prerequisite: Psy 603. (3)

**605. ADVANCED STATISTICS.** Design and analysis of behavioral experimentation with emphasis on analysis of variance, multivariate methods, and related techniques. Prerequisite: Psy 604. (3)

**606. METHOD AND THEORY IN PROGRAM EVALUATION.** A survey of methods used in the evaluation of social programs. Theoretical and methodological issues are stressed. Prerequisite: Psy 604. (3)

**607. COGNITIVE PSYCHOLOGY.** A review of the field of cognitive psychology. Topics include perception, attention, memory, language, decision making, reasoning, and problem solving. (3)

**609. BEHAVIOR MODIFICATION.** . Prerequisite: Psy 505. (3)

**610. TECHNIQUES OF ASSESS I: COGNITIVE TESTS.** Administration, scoring, and interpretation of individual and group tests. Prerequisite: Instructor Approval Required. (3)

**611. PERSONALITY ASSESSMENT.** Introduction to methods of assessing personality and psychopathology, including projective techniques, structured tests, and interviewing. Prerequisite: Instructor Approval Required. (3)

**612. SOCIAL PSYCHOLOGY.** An intensive review of the field of social psychology. Prerequisite: 12 hours of PSY courses. (3)

**614. BEHAVIOR THERAPY.** Application of learning theory to clinical problems. (3)

**615. PHYSIOLOGICAL PSYCHOLOGY.** The neuroanatomical and neurochemical basis of behavior. Prerequisite: 12 hours of PSY courses. (3)

**616. PSYCHOPHARMACOLOGY.** This course involves the study of drugs used for the treatment of mental disorders, as well as drugs of abuse. Topics include drug effects in humans, mechanisms of drug action, animal-based research directed toward understanding the neural basis of drug action, and animal models used in preclinical drug testing. (3)

**617. INDIVIDUAL EXPERIMENTAL RESEARCH.** May be repeated for credit. Prerequisite: Instructor Approval Required. (1-3)

**618. ADVANCED DEVELOPMENTAL PSYCHOLOGY.** Graduate-level survey of clinically relevant aspects of psychological development from infancy through adulthood. (3)

**619. TESTS AND MEASUREMENTS.** Principles of test construction, scoring, and interpretation. Corequisite: Psy 603. (3)

**621. SEMINAR.** Readings, reports, and discussions of special topics. May be repeated for credit. (1-3)

**622. CLINICAL ASSESSMENT PRACTICUM.** Conduct of psychological assessments in a field placement setting. Prerequisite: Psy 610 with minimum grade of B, Psy 611 with minimum grade of B. (3)

**623. CLINICAL PRACTICUM I.** Involves participation on a treatment team in the Psychological Services Center. Z grade. (3)

**624. CLINICAL PRACTICUM II.** Involves participation on a treatment team in the Psychological Services Center. This course is required of all second-year clinical students. Z grade. (3)

**625. CLINICAL PRACTICUM III.** Involves participation on a treatment team in the Psychological Services Center. This course is required of all third-year clinical students. Up to 3 hours may be taken. Z grade. Prerequisite: Psy 624 with minimum grade of Z. (3)

**626. CLINICAL PRACTICUM IV.** Involves participation on a treatment team in the Psychological Services Center. This course is required of all fourth-year clinical students. Up to three hours may be taken. Z grade. Prerequisite: Psy 625 with minimum grade of Z. (3)

**627. THEORIES OF PERSONALITY.** History of personality theory development with emphasis on current writers and research in the field. (3)

**628. CLINICAL PRACTICUM V: FIELD PLACEMENT.** Consultation, program planning and evaluation in a community mental health center, mental retardation center, or other field setting. Clinical students are required to take a minimum of three semesters, two of which must be completed consecutively at the same agency. May be repeated for credit. (3)

**629. ADVANCED ABNORMAL PSYCHOLOGY.** (3)

**631. THEORIES OF PSYCHOTHERAPY.** Overview of past and current approaches to therapy, with particular attention to understanding and integrating diverse theoretical systems. Prerequisite: Psy 629. (3)

**633. BEHAVIOR PROBLEMS IN CHILDREN.** Correlates and remediation of problem behaviors and emotional disturbances in children and adolescents. Prerequisite: Psy 629. (3)

**635. SEMINAR ON COLLEGE TEACHING.** Students will consider and develop effective teaching strategies and skills for academic careers in higher education. Topics include teaching philosophies, text selection, syllabus development, instructional technologies, proper organization and use of class time, exam construction, and grading models. (3)

**637. SEMINAR IN CLINICAL PSYCHOLOGY.** Readings, reports, and discussions of topics relating to the experimental foundations of clinical psychology, and methods and problems in personality research. May be repeated for credit. (3-6)

**641. ISSUES & ETHICS IN HUMAN RES & PROF PSY.** Readings, reports, and discussion of current issues, problems, and ethical procedures in research, teaching, and professional practices. (3)

**647. PROBLEMS IN PSYCHOLOGY.** Individual study and reading, preparation of literature surveys and technical manuscripts, other individual projects. May be repeated for credit. Prerequisite: Instructor Approval Required. (1-3)

**648. RESEARCH DESIGN.** Covers classic issues in research design such as reliability, validity, generalizability, the logic of casual inference and ethics. (3)

**651. HISTORY AND SYSTEMS OF PSYCHOLOGY.** An in-depth approach to the history and philosophy of the discipline of psychology and how these are related to development of psychology as a profession. (3)

**653. HUMAN PHYSIOLOGICAL RECORDING.** Practical and research applications of physiological recording techniques such as EEG, EMG, and EKG. Familiarity with actual recording procedures during the laboratory sequence. Prerequisite: Psy 615. (3)

**655. PSYCHOLOGY COLLOQUIUM.** Presentation of current research by students, faculty, and visiting psychologists. Z grade. Prerequisite: 12 hours of PSY courses. (1)

**690. CLINICAL STAFFING.** Case presentation of clients seen in practicum. Z grade. Prerequisite: Instructor Approval Required. (1)

**697. THESIS.** No grade. (1-12)

**797. DISSERTATION.** No grade. (1-18)

**798. PSYCHOLOGY INTERNSHIP.** One calendar year of supervised, full-time, on-the-job experience in an internship facility. Clinical internships are to be taken at APA- approved facilities or their equivalent. Nonclinical internships are to be arranged in consultation with the student's major professor. Z grade. (1-3)

## **SOCIOLOGY AND ANTHROPOLOGY**

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Associate Professor Kirsten A. Dellinger, chair • 103 Leavell Hall

[http://www.olemiss.edu/depts/soc\\_anth/](http://www.olemiss.edu/depts/soc_anth/)

Overview: The Department of Sociology and Anthropology offers the minor, Bachelor of Arts (B.A.), and Master of Arts (M.A.) degrees in sociology and anthropology.

Preliminary Requirements: Graduate Record Examination general test scores and undergraduate transcripts are required for admission to the degree program in full standing. In addition, letters of recommendation and a statement of purpose should be sent to the graduate coordinator in sociology.

### **M.A. in Sociology**

Description: Sociology is the systematic study of human social life. The M.A. program includes seminars and training in research and professional development, and prepares students for future careers as professionals in the social sciences. Graduates have gone on to enter Ph.D. programs in sociology, to teach in community colleges and universities, and to work as researchers in both the private and public sectors.

Course Requirements: The M.A. in sociology can be completed with either a thesis or nonthesis option.

The thesis option requires 27 semester hours of graduate course work and a minimum of 6 hours of thesis credit (33 hours total). The 27 course hours must include Statistics (Soc 501), Research Methods (Soc 502), Studies in Social Theory (Soc 601), Teaching Sociology (Soc 635), Professional Development I and II (Soc 621 and Soc 622), and Collaborative Research Seminar (Soc 623).

The nonthesis option requires 36 hours of graduate courses. A minimum of 29 hours must be in sociology and must include Statistics (Soc 501), Research Methods (Soc 502), Studies in Social Theory (Soc 601), Teaching Sociology (Soc 635), and Professional Development I and II (Soc 621 and Soc 622). In addition, nonthesis students are required to complete an oral presentation in a department-approved professional setting. For both options, a minimum of 3 credits must be earned in a discipline other than sociology.

### **M.A. in Anthropology**

Description: The M.A. in anthropology prepares a student to do original anthropological research. Graduates may seek research positions in anthropology or pursue doctoral studies.

Course Requirements: The M.A. in anthropology requires 24 semester hours of graduate course work and a minimum of 6 hours of thesis credit. At least half of the courses must be taken at the 600 level. The 24 course hours must include Quantitative Methods in Anthropology (Anth 572), Anthropological Theory and Methods (Anth 601), Seminar in Cultural Anthropology (Anth 606), Seminar in Biocultural Anthropology (Anth 607), Seminar in Archaeology (Anth 608), and Seminar in Research Design and Methodology (Anth 609).

Other Academic Requirements: During the first two years, students participate in seminars, which review the entire field of anthropology and prepare them for a two-day comprehensive exam. After passing this exam, master's candidates select a thesis director and committee to work with them on designing a thesis project. Candidates must prepare and orally defend a thesis.

### **Anthropology-Anth**

**405. HUMAN OSTEOLOGY.** This laboratory-based seminar focuses on teaching students methods of identification and analysis of human bone from archaeological sites. (3)

**406. METHODS IN ETHNOHISTORY.** Examines the cross-disciplinary concepts and methods to reconstruct the past of people who left no written record. (3)

**408. LABORATORY METHODS IN ANTHROPOLOGY.** An overview of the analytical techniques of archaeology, emphasizing their development, application, and literature. (1-6)

- 410. SHATTERZONE: THE CONSEQUENCES OF CONTACT.** This course examines the consequences of contact on the native inhabitants of the southeastern United States and the subsequent social and cultural transformations that followed. (3)
- 509. LANGUAGE EVOLUTION.** Exploration of the development of human language as the result of evolutionary and other processes. (3)
- 511. CROSS-CULTURAL STUDIES IN ETHNOGRAPHY I.** Comparative study of the cultural areas of the world, emphasizing the effects of ecology in the differential development of culture. Prerequisite: Instructor Approval Required. (3)
- 512. CROSS-CULTURAL STUDIES IN ETHNOGRAPHY II.** Comparative study of the cultural areas of the world, emphasizing the effects of ecology in the differential development of culture. Prerequisite: Instructor Approval Required. (3)
- 541. INDIVIDUAL STUDY PROJECT.** Prerequisite: Instructor Approval Required, Senior or above standing required. (3)
- 572. QUANTITATIVE ANTHROPOLOGY.** An examination of the theory and techniques of quantitative analysis in anthropology with particular emphasis on practical application. (3)
- 595. SEMINAR IN LINGUISTICS.** (Same as Ling 595). (3)
- 601. ANTHROPOLOGICAL THEORY AND METHODS.** Study of the history of theory and methods in the field of anthropology. Prerequisite: Graduate Program Level Only. (3)
- 606. SEMINAR IN CULTURAL AND LINGUISTIC ANTH.** (3)
- 607. SEMINAR IN BIOCULTURAL ANTHROPOLOGY.** (3)
- 608. SEMINAR IN ARCHAEOLOGY.** A review of the major theoretical development in archaeology with an emphasis on the implications for methods and applications. (3)
- 609. SEMINAR IN RESEARCH DESIGN & METHODOLOGY.** Training in the fundamentals of research design from conceptualization to execution. Students learn techniques for framing an original research question, doing background research, and conducting actual research. (3)
- 615. FUNDAMENTALS OF LINGUISTIC SCIENCE.** (3)
- 620. STUDIES IN ETHNOGRAPHY.** May be repeated for credit for a maximum of 9 hours. (3)
- 621. READINGS IN ANTHROPOLOGY I.** Review of the major contributions of leading anthropologists. (3)
- 622. READINGS IN ANTHROPOLOGY II.** Review of the major contributions of leading anthropologists. (3)
- 635. FIELD METHODS IN ARCHAEOLOGY.** Training in excavation methods and interpretation of results through supervised field work. (6)
- 697. THESIS.** No grade. Prerequisite: Graduate Program Level Only. (1-12)

#### **Sociology-Soc**

- 501. STATISTICS.** Introduction to descriptive and sampling statistics; emphasis on measures of central tendency, dispersion, linear correlation, and parametric tests of significance. (3)
- 502. SOCIAL RESEARCH METHODS.** In this course, students will critically analyze the assumptions, strengths, and limitations of different research methods in order to develop a researchable sociological question, write a research proposal, and carry out an actual research project. Prerequisite: Soc 501, Enrollment restricted to Sociology Major, Senior or above standing required. (3)
- 531. LECTURES IN COMMUNITY ORGANIZATION.** Theoretical and pragmatic aspects of community problems and development. Prerequisite: Enrollment restricted to Sociology Major, Senior or above standing required. (3)
- 545. SEMINAR IN POPULATION STUDIES.** Population distribution, composition, growth, migration, vital processes, and problems. (3)
- 552. INDIVIDUAL STUDY PROJECT.** Prerequisite: Instructor Approval Required. (3)
- 601. STUDIES IN SOCIAL THEORY.** Prerequisite: Graduate Program Level Only. (3)

- 605. PRACTICUM IN RESEARCH.** Practical research experience through the development of social research designs, data collection in the field, and detailed analysis and discussion of collected data. (3)
- 607. STUDIES IN THE COMMUNITY.** An examination of the theory and methods of community study. Major focus is on the community in change. Prerequisite: Graduate Program Level Only. (3)
- 611. STUDIES IN POPULATION ANALYSIS.** Current databases, methods in demographic research and their applications. (3)
- 613. STUDIES IN RACE AND ETHNICITY.** Examines racial and ethnic relations in historical and comparative perspectives using contemporary social scientific research and theories. (3)
- 615. SOCIOLOGY OF CULTURE.** This seminar will explore themes and debates that emerge from the intersection of contemporary social theory and sociology of culture, and that animate contemporary research on culture. (3)
- 621. PROFESSIONAL DEVELOPMENT I.** Practical topics related to the graduate program and the discipline of sociology, including succeeding in graduate school, preparing a vita, ethical and human subjects issues, forming a thesis committee, utilizing technology, and preparing for interviews. (1)
- 622. PROFESSIONAL DEVELOPMENT II.** Continuation of Soc 621. Prerequisite: Soc 621. (1)
- 623. COLLABORATIVE RESEARCH SEMINAR.** Offers graduate students the opportunity to discuss collectively a variety of issues related to writing an M.A thesis. Focus on peer review and revision of thesis chapters. (1)
- 625. CURRENT DEBATES IN GENDER.** Examines the social and cultural construction of gender differences in contemporary U.S. society, focusing on the social history of gender roles and gender inequality in current cultural and institutional practices. (3)
- 631. STUDIES IN DEVIANT BEHAVIOR.** Sociological perspectives on deviance; comprehensive review, analysis, and evaluation of theories of deviant behavior from the past to the present. (3)
- 635. TEACHING SOCIOLOGY.** Interactive seminar includes creating a teaching philosophy, fostering creativity, leading meaningful discussions, managing a classroom, planning a class or presentation, communicating powerfully, utilizing technology and evaluation. Develop practical skills and practice leading sessions. (3)
- 640. SOCIOLOGY OF HEALTH DISPARITIES.** Overview of historical roots and contemporary sociological relevance of disparities in health and wellness. Focus on race, ethnicity, gender, class, and sexual orientation and their impact on health. Potential remedies for disparities are discussed. (3)
- 651. FIELDS OF SOCIOLOGY.** Basic theory and methods applied to selected areas of sociological analysis. (3)
- 652. INDIVIDUAL STUDY PROJECT.** Prerequisite: Instructor Approval Required. (3)
- 697. THESIS.** No grade. Prerequisite: Graduate Program Level Only. (1-12)
- 699. INTERNSHIP IN SOCIOLOGY.** Supervised research and work in organizations either on or off campus. Z grade. (3-9)

## **SOUTHERN STUDIES — S ST**

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Professor Ted M. Ownby, director, Center for the Study of Southern Culture; • Barnard Observatory  
<http://www.olemiss.edu/depts/south/>

### **M.A. in Southern Studies**

Overview: The Center for the Study of Southern Culture offers the Master of Arts (M.A.) in Southern studies.

Preliminary Requirements: In addition to meeting Graduate School requirements for admission, applicants to the M.A. program in Southern studies must hold a baccalaureate degree in the humanities, arts, social sciences, or journalism. Applicants are required to submit a 500-word essay explaining why they wish to



pursue an M.A. degree in Southern studies. Admissions decisions are made by a committee composed of the program director and at least two other members.

Description: The M.A. in Southern studies is an intense, interdisciplinary course of study touching on all facets of Southern life, history, and culture. The program is the only one of its kind in the country, and students can study an array of Southern topics and issues, from Faulkner to the blues, from the Civil War to the civil rights movement, from folk art to fundamentalism.

Goals/Mission Statement: Through a variety of disciplines, including anthropology, art, history, literature, music, politics, religion, and sociology, Southern studies seeks to investigate the challenges and contributions of the region, in order to situate the South in the fabric of American life. The degree provides students with (1) a broad understanding of the South, its history, its culture, its potential; (2) the training, experience, and methods necessary to conduct independent study; (3) opportunities for individualized learning experiences through research and field work; and (4) humanistic education that will be valuable in itself and as a basis for the practice of a variety of professions.

Course Requirements: Students earn the M.A. degree in Southern studies in one of two ways: (1) complete a minimum of 36 hours of graduate course work, including S St 601, 602, and 603 (internship); or (2) complete a minimum of 24 hours of graduate course work, including S St 601 and S St 602, and 6 hours of thesis (S St 697). All students must select courses from a minimum of three of the disciplines listed below, with a maximum of 12 hours to be taken in any single discipline.

In addition to S St 601 and 602, which are required of every student in the Southern studies program, courses must be chosen from at least three of the following disciplines with a maximum of four courses from any single discipline: AAS 504, 593; Anth 508, 511; AH 565, 566, 569, 586; Engl 566, 661, 663, 675, 695; His 605, 606, 607, 701, 702; Mus 517, 518; Pol 609; Soc 607, 611, 613.

Other Academic Requirements: Thesis candidates must successfully complete a thesis defense. Nonthesis candidates will be required to make a colloquium presentation to their three-member committee, to which the public will be invited.

### **Southern Studies-S St**

**533. FIELDWORK & ORAL HISTORY.** Analysis of fieldwork techniques and examination of the contemporary South through oral history. Prerequisite: S St 101 or S St 102 or graduate standing. (3)

**534. DOCUMENTARY PHOTOGRAPHY.** An exploration of the contemporary South through documentary photography. Prerequisite: S St 101 or S St 102 or graduate standing. (3)

**555. FOODWAYS AND SOUTHERN CULTURE.** Interdisciplinary study of foodways as part of southern cultural life. Prerequisite: S St 101, S St 102. (3)

**597. SPECIAL TOPICS I.** Interdisciplinary study of specialized topics in Southern culture. (3)

**598. SPECIAL TOPICS II.** Interdisciplinary study of specialized topics in Southern culture. May be repeated once if topic varies. (3)

**599. SPECIAL TOPICS III.** Interdisciplinary study of specialized topics in Southern culture. (3)

**601. SOUTHERN STUDIES GRADUATE SEMINAR I.** Multidisciplinary reading and research seminar in Southern studies. Students will read and discuss a common core of readings while pursuing research in their individual areas of interest. (3)

**602. SOUTHERN STUDIES GRADUATE SEMINAR II.** Reading, discussion, and research and writing course focused on exploring various perspectives on Southern society, its development and its institutions, social classes, and ethnic and racial groups. (3)

**603. INTERNSHIP.** Supervised research and work at off-campus cultural institutions. A journal relating the fieldwork experiences of the intern is required of every student. Students receiving 9 hours of credit

must submit a final research paper and devote full time to the internship; students receiving 6 hours of credit must devote full time to the internship, but no final research paper is required; students receiving 3 hours of credit may undertake a half-time internship. Z grade. (3-9)

**605. ADVANCED INDIVIDUAL STUDY.** Readings for individual students under the direction of the instructor. (3)

**611. REGIONALISM.** Concepts of regionalism, with emphasis on the American South. (3)

**612. GLOBALIZATION AND THE U.S. SOUTH.** Analysis of the U.S. South within a global context. (3)

**697. THESIS.** No grade. (1-12)

**SPANISH** See Modern Languages.

**SPEECH PATHOLOGY** See Communication Sciences and Disorders.

## Meek School of Journalism and New Media

Professor Will Norton, dean • Farley Hall

<http://www.olemiss.edu/depts/journalism/>

Overview: The School of Journalism and New Media offers a Bachelor of Arts in Journalism (B.A.J.) and Master of Arts (M.A.) in journalism.

Accreditation: The undergraduate program is accredited by the Accrediting Council on Education in Journalism and Mass Communications.

### **M.A. in Journalism**

Description: The M.A. graduate program in journalism is an “academic” rather than a “professional” program. M.A. students planning to enter media careers (especially those without extensive academic or professional background in journalism) may, however, pursue a course of study combining undergraduate and graduate Jour courses.

Preliminary Requirements: In addition to meeting Graduate School admission requirements, applicants must submit a letter detailing their reasons for wishing to pursue a M.A. in journalism. Please send this letter directly to the School of Journalism and New Media. Applicants also should provide three letters of recommendation, including one addressing the applicant’s mass media experience, if applicable.

Applicants who do not have the equivalent of an undergraduate major in journalism will be required to take 12 hours of approved undergraduate journalism (Jour) courses (reduced by any acceptable undergraduate journalism hours that have been completed). Students who do not have the equivalent of an undergraduate major in journalism but who have work experience in the field may submit appropriate credentials and work samples to be considered in lieu of undergraduate courses.

Course Requirements: Students take a 30-semester-hour program of study, as follows: Jour 651, 652, 654, and 655; 6 hours of graduate-level Jour electives; 6 hours of graduate course work in an area of concentration outside the department; and 6 hours of Jour 697 to complete a thesis or thesis project. A thesis project must be a professional work in an appropriate medium equal in scope to a formal thesis, i.e., based on a formal proposal encompassing problem analysis, literature review, method statement, and bibliography. Both the thesis and the project require approval of a written prospectus and an oral examination.

### **Integrated Marketing Communications-IMC**

**501. INTRODUCTION TO INTEGRATED MKTG COMM.** This course introduces the basic disciplines of IMC: advertising, sales promotion, public relations, direct marketing, database marketing, proximity marketing, Internet marketing communication and relationship marketing. Prerequisite: Must have completed undergraduate IMC core or have permission of instructor, Course may be repeated only once. (3)

**502. CONSUMER BEHAVIOR/TARGET BEHAVIOR.** Consumer behavior is an attempt to use the insights and techniques of the social sciences to understand and predict how people will respond to messages, products, distribution channels. Prerequisite: Students dropping ES 447 must also drop ES 446, Must have completed undergraduate IMC core or have permission of instructor, Course may be repeated only once. (3)

**503. INSIGHTS AND MEASUREMENTS.** This course introduces basic methods for generating and acquiring information and data useful for IMC applications. Prerequisite: Students dropping ES 447 must

also drop ES 446, Must have completed undergraduate IMC core or have permission of instructor, Course may be repeated only once. (3)

**504. CREATIVE DEVELOPMENT AND DIRECTION.** This course covers - from start to finish - the many facets of IMC creative development and management, all of which are combinations of both right and left-brain thinking. Prerequisite: Students dropping ES 447 must also drop ES 446, Must have completed undergraduate IMC core or have permission of instructor, Course may be repeated only once. (3)

**505. INTERNET AND MOBILE MEDIA.** This course addresses the ways in which the Internet has changed marketing practice, combining all IMC practices specialized for the Internet platform, so that they can be studied as an integrated whole. Prerequisite: Students dropping ES 447 must also drop ES 446, Must have completed undergraduate IMC core or have permission of instructor, Course may be repeated only once. (3)

**507. DIRECT AND DATABASE MARKETING.** This course covers multiple methods of marketing to customers and potential customers directly and individually, in contrast with less precise, more broadly focused mass marketing media. Prerequisite: Students dropping ES 447 must also drop ES 446, Must have completed undergraduate IMC core or have permission of instructor, Course may be repeated only once. (3)

**508. ADVANCED MEDIA STRATEGY AND ANALYSIS.** This course is a detailed survey of new media planning and buying that is evolving in the 21st century. It covers multiple trends and challenges, including: client demand for Integrated Marketing Communications and greater accountability, audience fragmentation, media proliferation and new technologies. Prerequisite: Students dropping ES 447 must also drop ES 446, Must have completed undergraduate IMC core or have permission of instructor, Course may be repeated only once. (3)

**509. SPECIAL PROBLEMS IN IMC.** Directed individual study or professional project. May be repeated once for credit. Prerequisite: Students dropping ES 447 must also drop ES 446, Must have completed undergraduate IMC core or have permission of instructor, Course may be repeated only once. (3)

**555. INTEGRATED MARKETING COMMUNICATIONS.** A capstone course involving tactical application of IMC skills and disciplines, and to develop team-building skills. Alternative and competing IMC campaigns will be presented and judged by both professor and client. Prerequisite: IMC 404 with minimum grade of C, Course may be repeated only once. (3)

**556. MULTICULTURAL MARKETING COMMUNICATION.** Investigation and analysis of cultural diversity in integrated marketing communications and their effects on values, lifestyles and consumer behavior in international markets and within the United States will learn to anticipate cultural problems and optimize communications for different societies. Prerequisite: IMC 404 with minimum grade of C, Course may be repeated only once. (3)

**557. BRAND AND RELATIONSHIP STRATEGIES.** Focuses on critical thinking and problem solving in choosing the goals and tactics that will enable a firm to grow its business and develop its brand and relationships with key customers. Includes detailed examination of classic brand-building strategies and the ways in which marketers have developed and communicated strategies. Prerequisite: IMC 404 with minimum grade of C, Course may be repeated only once. (3)

**601. ADVANCED ACCOUNT PLANNING.** Presents principles and practices of the account planning process to develop skills, insights and strategies to use in different methods of influencing consumers' behavior. Prerequisite: Students dropping ES 447 must also drop ES 446, Must have completed undergraduate IMC core or have permission of instructor. (3)

**602. DESIGN AND VISUAL THINKING.** This course will focus on visuals as a means to communicate ideas through the practice of integrated marketing communications. In this class students will be led through exercises that will better facilitate an encompassing view of visual communication and the way it affects a message from concept to creation. Both theory and practice are emphasized. Prerequisite: Students dropping ES 447 must also drop ES 446, Must have completed undergraduate IMC core or have permission of instructor. (3)

**692. REPUTATION MANAGEMENT.** This course covers public relations as a key component of integrated marketing communications, interacting with other disciplines to manage a client's reputation among all publics and stakeholders. Prerequisite: Students dropping ES 447 must also drop ES 446, Must have completed undergraduate IMC core or have permission of instructor. (3)

#### **Journalism-Jour**

**500. JOURNALISM INNOVATION.** Journalism Innovation is a capstone class in which students trace, track, understand, and participate in a new media landscape, especially those changes related to the Web and other forms of digital media. Prerequisite: Jour 377 or Jour 378 or Course may be repeated only once. (3)

**501. MAGAZINE SERVICE JOURNALISM PUBLISHING.** Conceptualization, market research, and production for a prototype and media kit for a service journalism magazine. Prerequisite: Jour 401 with minimum grade of C, Course may be repeated only once. (3)

**513. THE PRESS AND THE CHANGING SOUTH.** An analysis of politics in the southern United States; examination of the role of the press in covering social issues; techniques used to inform the public about phenomena such as protest movements and their impact on social, political, and economic change. Prerequisite: Course may be repeated only once. (3)

**553. SERVICE JOURNALISM MANAGEMENT.** Business aspects of magazine publication. Personnel management with emphasis on getting productivity and quality results from creative people. Prerequisite: Jour 401 with minimum grade of C, Course may be repeated only once. (3)

**571. COMMUNICATIONS LAW.** Prerequisite: Course may be repeated only once. (3)

**572. HISTORY OF MASS MEDIA.** Prerequisite: Course may be repeated only once. (3)

**573. MASS COMM, TECHNOLOGY, AND SOCIETY.** The theory of mass communications technology in relation to media functions, responsibilities, and influence in society. Prerequisite: Course may be repeated only once. (3)

**574. PUBLIC OPINION AND THE MASS MEDIA.** Effects of language, culture, and ideology. Communication in the formation and action of crowds, masses, and publics. Mass and personal persuasion and propaganda techniques. The diffusion of ideas. Community power structures. Public opinion measurement. Prerequisite: Course may be repeated only once. (3)

**575. MASS MEDIA ETHICS AND SOCIAL ISSUES.** Formulation and discussion of professional ethics for journalists. Analysis of social forces affecting media performance. Prerequisite: Course may be repeated only once. (3)

**577. DEPTH REPORTING.** Investigative and interpretative news writing; coverage of courts and legislative bodies; use of public records. Prerequisite: Jour 377 with minimum grade of C, Course may be repeated only once. (3)

**578. TELEVISION DOCUMENTARY REPORTING.** Development of skills in conceiving, documenting, recording, and presenting information at broadcast standards as mini-documentaries in television newscasts or as 30-minute and 60-minute documentary programs. Prerequisite: Jour 378 with minimum grade of C, Course may be repeated only once. (3)

**580. TOPICS IN JOURNALISM.** Perspectives on issues such as international mass communication, media and society, journalism ethics, diversity, etc. May be repeated for credit. Prerequisite: Instructor Approval Required, Course may be repeated only once. (3)

**599. MEDIA PROBLEMS.** Directed individual study or professional project. (May be repeated once for credit). Prerequisite: Consent of Department Chairperson Required, Course may be repeated only once. (1-3)

**651. RESEARCH IN MASS COMMUNICATIONS.** Introduction to basic procedures for gathering and evaluating information in mass communications. (3)

**652. SEMINAR IN MASS COMMUNICATION THEORY.** A survey of mass communication theory. (3)

**653. PROBLEMS IN PUBLIC OPINION.** Integration of theory with research methods for the production of a research project. (3)

**654. SEMINAR IN COMMUNICATIONS LAW.** Continuation of Communication Law with concentration on specific areas of law in regard to the mass media. (3)

**655. SEMINAR IN HISTORY OF MASS MEDIA.** Concentrated analysis and discussion of readings on media history. Prerequisite: Jour 301. (3)

**664. JOURNALISM PRACTICES AND ETHICS.** Analysis of the people who report the news within the context of a time period, an ethical issue, a specific media or any other construct that provides a cohesive whole. Issues covered will range from professional problems to the human, social, and other consequences of news, news practices and news technology on the people who report the news. (3)

**668. NARRATIVE JOURNALISM.** In-depth, non-fiction narrative writing course for print, radio and online, consisting of features, profiles, personal essays, travel writing and sports analysis. Considers the practice of narrative journalism within the context of American journalism-literary history and within the context of daily news, giving student writers an expansive platform to explore topics of interest. Prerequisite: Instructor Approval Required. (3)

**680. ADVANCED TOPICS IN JOURNALISM.** Advanced perspectives on issues such as international mass communication, media and society, journalism ethics, diversity, communication theory, etc. May be repeated for credit. (3)

**697. THESIS.** No grade. (1-12)

## **Patterson School of Accountancy**

W. Mark Wilder, dean  
200-H Conner Hall • 662-915-5756

Dale L. Flesher, associate dean  
200-E Conner Hall • 662-915-7623

<http://www.olemiss.edu/depts/accountancy/>

**Overview:** The School of Accountancy offers a Master of Accountancy (M.Accy.), a Master of Taxation (M.Tax.), and a Doctor of Philosophy (Ph.D.) in accountancy.

**Accreditation:** The School of Accountancy has been accredited by the AACSB (American Assembly of Collegiate Schools of Business) since 1944. In 1983, the School of Accountancy was one of the first 28 schools nationwide to receive separate accounting accreditation. Accreditation is offered only to schools that meet the strict academic standards and program requirements prescribed by this assembly. All degree programs in the School of Accountancy received full reaccreditation in 2001.

### **Preliminary Requirements**

**Prerequisites** • Students must present credit in the following undergraduate courses (or their equivalents): Accy 303, 304, 309, 401, 402, 405; Econ 202, 203, 230, 302; Bus 250 and Accy 411; Mgmt 371; Mktg 351; Math 267; and knowledge of computer programming. A minimum grade of C is required in Accy 401, 402, and 405.

Admission to this program is based on the applicant's undergraduate record and the score made on the Graduate Management Admission Test. Test scores must be presented prior to admission. International students must earn a minimum score of 600 on the paper-based TOEFL, or 100 on the Internet-based TOEFL.

**Additional Information:** The American Institute of Certified Public Accountants recommends five years of academic study in order to obtain the professional knowledge for a career in accounting. More than 46 states, including Mississippi and surrounding states, have laws requiring five years of study as a prerequisite to sit for the CPA examination.

### **Master of Accountancy (M.Accy.)**

**Description:** The objective of the M.Accy. is to provide students with greater breadth and depth in accounting education. The purpose of this program is to provide students with the knowledge and background necessary for entry into the profession and to enable them to continue to grow and develop within the profession.

**Course Requirements:** Requirements for the M.Accy. include Accy 509, 601, 605, and 610. Twelve additional hours of accounting electives may be chosen from Accy 501, 515, 516, 521, 525, 530, 603, 609, 612, 625, 626, 633, and 634. In addition, 6 hours of nonaccounting electives may be chosen from any approved 500-level or above course.

### **Master of Taxation (M.Tax.)**

**Description:** The objective of the M.Tax. is to provide students with a greater breadth and depth in accounting education and a specialization in the tax area. The purpose of this program is to provide education to allow entry into a professional tax career upon graduation and prepare for continuing growth and development.

Course Requirements: Requirements for the M.Tax. degree include Accy 509, 601, 605, 610, and 612. Six additional hours of tax electives may be chosen from Accy 603, 625, 626, 633, and 634. Six hours of accounting electives may be chosen from Accy 501, 515, 516, 521, 525, 530, 609, and 690. In addition, 3 hours of nonaccounting electives may be chosen from any approved 500-level or above course.

### **Ph.D. in Accountancy**

Description: The objective of the Ph.D. in accountancy program is to give students a greater breadth and depth in accounting and a specialization in a particular area. Graduates learn research tools, so they are well-prepared for careers in accounting education where opportunities are plentiful.

Preliminary Requirements: Admission to the program is based on the applicant's undergraduate and graduate record as well as the score made on the Graduate Management Admission Test.

A GMAT score of 600 or higher is required for admission. In recent years, GMAT scores have averaged above 650. International students must earn a TOEFL score of 600 or above (or 100 on the Internet-based TOEFL). All students must present credit equivalent to a bachelor's degree and a master's degree in accountancy. Two undergraduate calculus courses are also required. All students should hold some form of accounting certification such as the CPA, CMA, and/or CIA.

Fulfillment of these criteria does not guarantee admission; a limited number of students are accepted into the program each year. A personal interview, on campus, is required of all applicants prior to admission.

Course Requirements: The minimum course requirements for the Ph.D. in accountancy include 25 hours in accountancy, 12 hours in a minor field, 15 hours in research- tool courses, and 18 hours of dissertation. At least 25 hours in 600-level accountancy courses are required. Specific required courses include Accy 602, 607, 613, 614, 620, and 750. Course schedules differ depending upon the background and needs of each student.

Other Academic Requirements: Doctoral students are required to have a minor field, which is usually in the business school (such as management, management information systems, or finance) but may be in other disciplines if such courses meet the research needs of the student. A popular minor is taxation, which can include courses in the law school. A minor field generally requires the completion of at least four courses.

Doctoral students must also complete a comprehensive examination, a dissertation prospectus, a dissertation, and a final oral defense of the dissertation.

### **Accountancy-Accy**

**501. INTERNAL/OPERATIONAL AUDITING.** Emphasis on proper internal controls and on compliance with applicable laws, regulations, and policies. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Accy 304 with minimum grade of C, Junior or above Standing Required. (3)

**504. STANDARD COSTS.** Trends in costing based on standards in manufacturing industries, setting standards, measuring actual costs against standards, and disposition of variances. Prerequisite: Accy 309. (3)

**505. TAXATION FOR NON-ACCOUNTANTS.** Fundamentals of federal taxation, including the background knowledge necessary to recognize the tax consequences of business and investment decisions. Prerequisite: Accy 202. (3)

**509. INCOME TAXES II.** Federal and state income taxes on corporations, partnerships, estates, and trusts; a brief study of estate and gift taxes. Prerequisite: Accy 405 with minimum grade of C. (3)



- 514. MANAGERIAL AND BUDGETARY CONTROL.** Work of the controller, with special emphasis on the construction, control, and interpretation of accounts. Budgets of various kinds; recent CPA problems dealing with budgeting; ends in costing based on standards in manufacturing industries, setting standards, measuring actual costs against standards, and disposition of variances. Prerequisite: Accy 202 with minimum grade of C. (3)
- 515. ACCOUNTANCY PROBLEMS I.** Problems and issues encountered in accounting practices. (3)
- 516. ACCOUNTANCY PROBLEMS II.** Problems and issues encountered in accounting practices. (3)
- 519. INTRODUCTION TO TAX LAW.** Survey of taxation of individuals and corporations. (3)
- 520. ACCOUNTING INTERNSHIP.** A directed internship in an organization under the supervision of accounting practitioners. Z grade. (3-6)
- 521. INTERNATIONAL ACCOUNTING.** Topics include comparative international accounting systems, efforts to harmonize accounting standards internationally, problems of foreign currency translation, and accounting and performance evaluation problems of multinational corporations. Corequisite: Accy 402. Prerequisite: Accy 304 with minimum grade of C. (3)
- 525. PROFESSIONAL REPORT WRITING.** Intensive practice in professional report writing for accountants. Principles emphasized include analysis of audience, organization of ideas, clarity, conciseness of presentation, and correct grammar. Formats include memos, research reports, business letters, and other types of written communications used by accountants in practice. (3)
- 530. INFORMATION TECHNOLOGY AUDITING.** Nature, control, and audit of computer-based accounting information systems. (3)
- 601. SEMINAR IN ACCOUNTING THEORY.** Modern accounting theory; background and applications, with emphasis on the authoritative pronouncements that influence the application of accounting theory. Prerequisite: Accy 304 with minimum grade of C. (3)
- 602. SEMINAR IN CONTEMPORARY ACCOUNTING THEORY.** Financial accounting theory; theory of income and asset valuation, with emphasis on current and historical accounting thought. Prerequisite: Accy 601 with minimum grade of C. (3)
- 603. SEMINAR IN CONTEMPORARY TAXATION.** This course will cover the theory of taxation and current topics in taxation. The objective is to provide insight into the structure of the tax system as well as to inform students of recent major changes in the tax law and procedure. (3)
- 605. COST/MANAGERIAL ACCOUNTING.** Management profit planning and budgeting control; advanced cost accounting concepts and techniques, uses of quantitative tools applied to managerial accounting, and the relationship of information systems to cost/managerial accounting. (3)
- 606. MANAGERIAL ACCOUNTING.** Uses and analysis of financial statements; cost accumulation and control; short- and long-range financial planning. Emphasis is placed on the integration of concepts through the use of comprehensive case problems. (Does not apply toward a degree in accountancy). Prerequisite: Accy 202. (3)
- 607. SEMINAR.** Guided individual research in accounting, including research methodology problems. (Does not apply toward a degree in accountancy). Prerequisite: Accy 601. (3)
- 609. SYSTEMS SEMINAR.** A study of information systems concepts and applications. Case studies will provide the student an opportunity to relate systems concepts to the actual problems encountered in the analysis, design, implementation, and use of computer-based information systems. Prerequisite: Accy 304 with minimum grade of C. (3)
- 610. AUDITING SEMINAR.** Philosophy, history, and development of auditing; various auditing topics selected for discussion and for written research reports. Prerequisite: Accy 401. (3)
- 611. CORPORATIONS.** Formation, management, and powers of private corporations; powers and duties of directors and stockholders and their liability for ultra vires transactions and for the debts of the corporations. (Same as Law 601). (3)
- 612. TAX RESEARCH SEMINAR.** Guided individual research in taxes; development of a separate integrated tax plan for each type of business entity. Prerequisite: Accy 405 with minimum grade of C. (3)

**613. SEM. IN AUDIT & ACCOUNTING INFO SYSTEMS.** Doctoral accounting research seminar designed to help students prepare to conduct scholarly research in auditing and in accounting information systems. Includes introduction to methodologies and critical analysis of published studies. (3)

**614. SEM IN FIN ACCOUNTING & CAPITAL MARKETS.** Doctoral accounting research seminar designed to help students prepare to conduct scholarly capital-markets-based research. Includes introduction to methodologies and critical analysis of published studies. (3)

**620. INDIVIDUAL STUDY.** Reading and research in a topic in the field of accountancy. (May be repeated once for credit). (3)

**623. TAX PROBLEMS.** Advanced tax problems considered in seminar. (Same as Law 623). (1-3)

**625. INTRODUCTION TO INTERNATIONAL TAXATION.** Taxation of multinational organizations and individuals, with particular attention to cross-border transactions. (3)

**626. ESTATE AND GIFT TAXATION.** Federal estate, gift, and generation-skipping transfer taxes. (Same as Law 626). (3)

**629. BUSINESS PLANNING.** Advanced problems in corporate transactional practice. (Same as Law 629). (1-3)

**633. INC TAX OF CORPORATIONS & SHAREHOLDERS.** Federal income taxation of corporate distributions in the form of dividends and redemptions, reorganizations, liquidations, and the formation of the corporate enterprise. (Same as Law 633). (3)

**634. TAXATIONS OF PARTNERS AND PARTNERSHIPS.** The income taxation of estates, partnership and Subchapter S Corporations, of the Internal Revenue Code. (Same as Law 634). (1-3)

**650. SECURITIES REGULATIONS.** An examination of federal and state securities laws and how they regulate securities offerings, issuers, markets, and market participants. (Same as Law 650). (3)

**660. DEFERRED COMPENSATION.** Commonly used deferred compensation arrangements, including qualified pension, annuity, profit-sharing and stock bonus plans, nonqualified plans, restricted property, statutory and nonstatutory option plans. (Same as Law 660). (3)

**690. PROFESSIONALISM, POLICY AND RESEARCH.** A capstone, integrative course for Master of Accountancy students. Emphasizes the environment of the accounting profession, professionalism, interaction between business policy and management process, the accountant as a manager, current developments and emerging issues, and applied research methodology. Many of the topics are covered on a case basis. (3)

**697. THESIS.** No grade. (1-12)

**750. RESEARCH COLLOQUIUM IN ACCOUNTANCY.** Provides doctoral students with exposure to current research projects in all areas of accountancy. May be repeated for credit. Z grade. (1)

**797. DISSERTATION.** No grade. (1-18)

## School of Applied Sciences

Velmer Burton Jr., dean

George Street University House • 662-915-7900

[http://www.olemiss.edu/depts/applied\\_sciences/](http://www.olemiss.edu/depts/applied_sciences/)

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### COMMUNICATION SCIENCES AND DISORDERS—CSD

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Assistant Professor Lennette Ivy, interim chair • 303 George Hall

[http://www.olemiss.edu/depts/comm\\_disorders/index.htm](http://www.olemiss.edu/depts/comm_disorders/index.htm)

**Overview:** The Department of Communication Sciences and Disorders offers the Bachelor of Science (B.S.) in communication sciences and disorders, as well as the Master of Science (M.S.) in communication sciences and disorders.

**Accreditation:** The M.S. in communication sciences and disorders program is accredited by the American Speech-Language-Hearing Association (ASHA) through the Council on Academic Accreditation.

**Preliminary Requirements:** Applicants must have completed an undergraduate major in communication sciences and disorders or the prerequisite undergraduate course work before entering the graduate program.

#### **M.S. in Communication Sciences and Disorders**

**Description:** The M.S. in communication sciences and disorders is designed for students who are interested in the study of speech-language pathology, the study of habilitation and rehabilitation of communication disorders and swallowing disorders.

**Goals/Mission Statement:** The mission of the Department of Communication Sciences and Disorders is to provide an accredited program to educate and train graduate students in the discipline of communication disorders specific to the field of speech-language pathology. In addition, the department houses a Speech and Hearing Clinic for training students and for service to the community and university consumers.

**Course Requirements:** Course requirements are 43 academic course hours and 15 hours of clinical practicum. Academic course requirements are CSD 505, 513, 521, 523, 526, 532, 541, 557, 613, 620, 622, 624, 625, 627, 642, and 605. Clinical course requirements are five semesters of clinical practicum (CSD 595).

**Other Academic Requirements:** Graduate students have a thesis option, requiring at least 6 hours of thesis credit in addition to the required didactic and clinical practicum courses. Students must pass a comprehensive examination in the last semester of enrollment.

#### **Communication Sciences and Disorders-CSD**

**501. SURVEY OF COMMUNICATIVE DISORDERS.** Disorders of speech, language, and audition; emphasis on causation, correlates, and management. (3)

**505. NEUROPHYSIOLOGY OF COMMUNICATION.** Neuroanatomical and neurophysiological bases of sensory, central, and motor aspects of language. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: CSD 205 with minimum grade of C. (3)

**506. ANAT/PHYS/PATH AUD SYS.** Normal and pathologic structure and function of the auditory system with emphasis on diagnosis, audiologic manifestation, and treatment of auditory disorders. (3)

**507. FUNDAMENTALS OF HEARING SCIENCE.** Principles of decibel notation, properties of sound, acoustics, and psychophysical measurements. (3)

**513. SPEECH SCIENCE.** Physiology and acoustics of the speech mechanism: ventilation, phonation, resonance, articulation, and audition. Emphasis on instrumentation used in assessment and remediation. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: CSD 205 with minimum grade of C. (3)

**520. ADVANCED DIAGNOSTIC TECHNIQUES.** Current diagnostic theory and measurement methods for principal pathologies of speech, language, and hearing. (3)

**521. DISORDERS OF FLUENCY.** Contemporary theories of etiology and principles of management for disorders of stuttering; study of related disorders. Prerequisite: Graduate Program Level Only , Enrollment restricted to Communication Disorder Majors. (3)

**523. PHONOLOGICAL DISORDERS.** Misarticulation; emphasis on contemporary methods of management. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: CSD 205 with minimum grade of C, CSD 211 with minimum grade of C. (3)

**526. NEUROGENIC DISORDERS OF LANGUAGE.** Study of the fundamentals of neurolinguistics; clinical problems of aphasia and traumatic brain injury; other clinical applications and neurolinguistics across the life span. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: CSD 505 with minimum grade of C. (3)

**531. SPECIAL PROBLEMS IN CD.** Specialized topics in speech-language pathology, speech science, deaf education, and audiology. (May be repeated for credit). (1-3)

**532. WORKSHOP IN COMM SCIENCES & DISORDERS.** Intensive short-term study of selected issues and clinical procedure in communication sciences and disorders. May be repeated for credit a maximum of 6 credit hours by undergraduates only. (1-3)

**541. LANGUAGE DEV & DISORDER IN PRESCHOOL.** Theories and sequential stages of language development in the birth-to-age-6 population. Attention given to the assessment and remediation of language disorders. (Same as Ling 541). (3)

**551. CLINICAL AUDIOLOGY.** Theory, rationale, and techniques of basic hearing evaluation. Calibration standards and procedures for audiological equipment. Prerequisite requirements for this course may also be satisfied by equivalent course work as approved by the department. Prerequisite: CSD 351 with minimum grade of C. (3)

**557. AUDIOLOGY FOR THE SLP.** Diagnostic and habilitative procedures for adults and children across various settings. (2)

**560. MANUAL COMMUNICATION I.** A beginning course in sign language designed to familiarize the student with the various sign language systems and to provide the student with a basic core language. (3)

**562. MANUAL COMMUNICATION II.** An intermediate course in manual communication designed to increase expressive and receptive sign language skills, to provide understanding of the linguistic nature of American Sign Language (AMESLAN) and to promote the acquisition of AMESLAN as a second language. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: CSD 359 or CSD 560. (3)

**575. AUDIO INSTRU & MEAS.** Familiarization with basic technical characteristics and principles of instruments used in audiology. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: CSD 507 with minimum grade of C. (3)

**591. CLINICAL PRACTICUM IN AUDIOLOGY.** Practical experience in conventional audiologic techniques. May be repeated for credit. Z grade. (1-3)

**592. CL SEM/SPEECH-LANG PATH.** Issues and techniques in the evaluation and remediation of speech language pathologies. May be repeated for credit. Z grade. (2)

**593. CLINICAL SEMINAR IN AUDIOLOGY.** Issues and techniques in the evaluation and remediation of auditory problems. May be repeated for credit. Z grade. (2)

- 595. GRADUATE PRACTICUM.** Advanced application of diagnostic and clinical management procedures. (May be repeated for credit). (2-9)
- 601. DIRECTED STUDY.** May be repeated for credit for a maximum of 9 hours. (1-3)
- 605. COUNSELING THRY/PRAC.** Theoretical foundations for counseling the communicatively handicapped. Emphasis on psychoanalytical theory, self-theory, ego-counseling, behavioral counseling, and client-centered therapy. (2)
- 612. ADVANCED CLINICAL AUDIOLOGY.** Behavioral techniques theory, and interpretation of special tests for organic, functional, and central auditory processing disorders. Prerequisite: CSD 551. (3)
- 613. RSCH DESIGN & ANAL.** Historical and contemporary experimental approaches in communicative disorders; emphasis on normal parameters. (Same as Ling 613). (3)
- 615. ELECTROPHYSIOLOGIC EVALUATION.** Principles, theory, and clinical application of auditory evoked potentials and vestibular evaluation. Prerequisite: CSD 506. (3)
- 616. ADVANCED ELECTROPHYSIOLOGIC EVALUATION.** Advanced techniques and application of electrophysiologic measures. Prerequisite: CSD 615. (3)
- 620. ASSESSMENT AND TREATMENT OF DYSPHAGIA.** Course will include anatomy and physiology of swallowing, etiologies of dysphagia and assessment and intervention techniques. Advanced study includes ethical and professional issues for pediatric and adult populations. Prerequisite: CSD 505. (3)
- 622. VOICE AND RESONANCE DISORDERS.** Organic and nonorganic disorders of voice. Prerequisite: CSD 205 with minimum grade of C. (3)
- 624. CRANIOFACIAL ANOMALIES.** Provides the foundation in the science and theory of genetics, embryology, and other mechanical factors associated with craniofacial anomalies; medical, prosthetic, and behavioral interventions of related resonance, articulation and swallowing disorders secondary to craniofacial anomalies will be presented. Prerequisite: CSD 205 with minimum grade of C. (2)
- 625. GENETICS, AUTISM, AUGMENTATIVE & ALT COM.** This course will introduce basic organics and genetics to include genetic linkage and mapping, an appreciation of genetic variations and population genetics in medicine, and an understanding of the basic genetic foundation upon which treatments might be available. Autism spectrum disorders (ASD) will develop from the genetics discussion and will include assessment and treatment of individuals diagnosed on the spectrum, with a range of possible treatments to include augmentative and alternative communication. Implementation is by lecture, discussion, and demonstration. (2)
- 626. APHASIA.** Study of etiology, testing, and therapeutic principles of management of aphasia, with special emphasis on neurological and linguistic aspects. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: CSD 505 with minimum grade of C. (3)
- 627. NEUROGENIC DISORDERS OF SPEECH.** Theoretical constructs, assessment, and treatment of speech disorders of a neurologic origin in children and adults. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: CSD 505 with minimum grade of C. (3)
- 630. CEREBRAL PALSY.** Etiology, diagnosis, and management procedures; special tests; related disorders. (3)
- 631. COMMUNICATION CHANGES IN AGING.** Typical and atypical communication and swallowing abilities in the aging population. Emphasis will be placed on the underlying systemic changes and differential diagnosis of disorders in cognition, communication, and swallowing. Prerequisite: CSD 505. (3)
- 642. LAN DE DIS SCHOOL-AGE.** Stages of language development in children over age 6; assessment and remediation of language disorders typical of the school-age child. (3)
- 649. PEDIATRIC AUDIOLOGY.** Development of the auditory system and auditory behavior; etiology and differential diagnosis of hearing loss; testing and rehabilitation techniques for hearing-impaired infants, preschool, and school-age children. Prerequisite: CSD 506, CSD 551. (3)

**651. AURAL REHABILITATION.** Advanced study of the management of hearing-impaired individuals, including techniques for communication training, assessment of hearing handicap, and application of special amplification devices. Prerequisite: CSD 551, CSD 653. (3)

**653. HEARING AIDS.** Theoretical, technical, and practical aspects of hearing aids, electroacoustic characteristics, evaluation, and analysis procedures, earmold and hearing aid modifications, and dispensing legislation. Prerequisite: CSD 551. (3)

**654. ADV AMP THEORY & TECH.** Study and application of current research to the provision of amplification for the learning impaired. Prerequisite: CSD 653. (3)

**657. INDUSTRIAL AUDIOLOGY.** Effects of noise on hearing and well-being, the management of effective hearing conservation programs, and principles of noise management, including calibration of instrumentation for sound-level measurement. Prerequisite: CSD 506, CSD 507, CSD 551. (3)

**659. SEMINAR IN AUDIOLOGY.** Selected special problems. (May be repeated for credit for a maximum of 9 hours). (1-3)

**670. CEN AUD PROC.** Study of the anatomy and physiology of the auditory brainstem and cortical pathways, normal and disordered auditory processing, measures of central auditory function, and tools and techniques for remediation/compensation. (3)

**673. PERCEPTION OF SPEECH.** An introduction to basic physical properties of speech stimuli, including decoding, processing, and converting speech signals with linguistic units. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: CSD 507 with minimum grade of C. (3)

**697. THESIS.** No grade. (1-12)

## **NUTRITION AND HOSPITALITY MANAGEMENT**

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Associate Professor Kathy B. Knight, Chair • Lenoir Hall • 662-915-1902

<http://www.olemiss.edu/depts/fcs/>

### **Master of Science in Food and Nutrition Services**

Description: The Master of Science in food and nutrition services degree prepares students for doctoral studies in nutrition, food service management, or hospitality management for postsecondary teaching positions, or for careers in established or emerging clinical or industrial settings. The program is designed to provide students with a broad background in nutrition, food service management, or hospitality management; development of necessary analytical skills; and exposure to current nutrition, food service management, and hospitality management research.

Goals/Mission Statement: The mission of the M.S. in food and nutrition services is to prepare students for entry into nutrition-related or hospitality management-related fields of study and/or their industries with excellence and integrity.

#### Learning Outcomes:

1. Students will be able to demonstrate how to interpret, evaluate, and use professional literature to make ethical, evidence-based practice decisions.
2. Students will be able to demonstrate effective and professional oral and written communication and documentation when communicating with individuals, professional groups, and the public.
3. Students will be able to incorporate professional knowledge with effective management and education techniques to facilitate food, nutrition, and hospitality-related behavior change.
4. Students will be able to use a decision-making process to identify nutrition- or hospitality-related problems, and to determine and evaluate appropriate interventions.

5. Students will be able to apply knowledge of nutrition or hospitality management to enhance the well-being of individuals and groups.
6. Students will be able to apply management and business theories and principles to the development, marketing, and delivery of nutrition or hospitality programs or services.

Course Requirements:

Core Curriculum (12 hours)

NHM 625-Research I Principles of Research	3
NHM 626-Research II Application of Research Methods	3
NHM 617-Advanced Foodservice Management	3
NHM 620-Leadership in Dietetics and Hospitality Management Organizations	3

Other Academic Requirements

Research & Practical Application Curriculum (3-12 hours)

Students will choose from at least one of the following:

NHM 693-Directed Independent Research	3-6
NHM 697-Thesis	6
NHM 699-Supervised Practice (concurrently enrolled in Dietetic CP Program)	12

Students will choose from one of the following emphasis areas:

Nutrition/Dietetics Emphasis curriculum (9 hours)

NHM 611-Advanced Nutrition	3
NHM 612-Nutrition & Exercise in Health & Disease Management	3
NHM 613-Theoretical Applications for Nutrition Education	3

or

Hospitality Management Emphasis curriculum (9 hours)

NHM 615-Hospitality Financial Management	3
NHM 624-Advanced Marketing in the Hospitality Industry	3
NHM 627-Trends and Topics in Hospitality Management	3

Electives (with adviser approval, to bring the total number of credits to 36 semester hours). The following list is suggested but not inclusive:

NHM 614-Foundations in Child Nutrition Program Management	3
NHM 618-Maternal, Infant, and Child Nutrition	3
NHM 619-Sports Nutrition	3
NHM 621-Advanced Human Development	3
NHM 622-Nutrition Policy	3
NHM 623-Nutritional Epidemiology	3
ES 608-Methods and Procedures of Exercise Testing	3
ES 611, 616-Exercise Physiology I and II	6
ES 615-Physiological Aspects of Aging	3
HP 605-Health Promotion Planning	3
HP 645-Organization and Administration of Health Promotion	3
HP 646-Introduction to Epidemiology	3

**Nutrition and Hospitality Management-NHM**

**513. DEMONSTRATION TECHNIQUES.** Principles and procedures in the organization and presentation of demonstrations in various phases of home economics. (3)

**515. NUTRITION IN WEIGHT MGMT & EATING DISORD.** Energy metabolism and principles of human nutrition applied to weight control. Issues concerning the development and health effects of eating disorders will be examined. Prerequisite: NHM 311. (3)

**516. NUTRITION IN AGING.** Nutritional needs of the aged, including concepts of menu selection and preparation. Psychological, physiological, and socioeconomic factors affecting dietary problems and practices among the elderly. Prerequisite requirements for this course may also be satisfied by equivalent course work as approved by the department. Prerequisite: NHM 311. (3)

**521. FAMILY SEMINAR.** Examination of issues that face families across the life cycle, as well as public policy issues that impact families. (3)

**523. EARLY CHILDHOOD EDUCATION.** (3)

**525. SEM-SCI / NBR CONCEPTS.** (3)

**527. SEM-ART / MUSIC-EARLY CHILDHOOD.** (3)

**535. HUMAN SEXUALITY.** The physiological, psychological, sociological, and ethical aspects of sexuality are addressed. Topics include, but are not limited to, the human sexual system, sexual response, gender identity and sexuality, sexual behavior and fulfillment, sexual expression, sexual value systems, sexual diseases, and sexual ethics. (3)

**543. MANAGEMENT OF FAMILY FINANCIAL PROBLEMS.** Alternate ways of meeting family financial needs, including earning, spending, saving. (3)

**550. SEMINAR IN ENTREPRENEURSHIP.** Implementation of a business plan. May require student-paid overnight travel to a regional center. Prerequisite: Accy 201 with minimum grade of C, Accy 202 with minimum grade of C, Bus 271 with minimum grade of C, Mktg 361 with minimum grade of C, Mktg 367 with minimum grade of C, NHM 102 with minimum grade of C. (3)

**571. MARRIAGE AND FAMILY THERAPY.** Study of historical and contemporary contexts of family therapy and prominent family therapy models. (3)

**593. INDIVIDUAL STUDY.** Development of special projects under supervision. (1-6)

**595. INTERNATIONAL STUDY TOUR.** A student-paid tour of major European centers, related industries, markets, museums, cultural and historical points of interest. Requires permission of instructor, passport, visa (if applicable), and immunization shots. (3)

**611. ADVANCED NUTRITION.** Scientific principles of human nutrition at the cellular and systemic levels; application to needs at all stages of the life cycle. (3)

**612. NUTRITION & EXRCES IN HLTH & DISEASE MGMT** Advanced study of the modifications of the normal diet and physical activity patterns to meet needs in the treatment of disease. Prerequisite: NHM 611. (3)

**613. THEORETICAL APPLICATION FOR NUTRITNL. ED.** Development and delivery of nutrition education programs, products, and services to individuals, groups, and populations. Prerequisite: NHM 611. (3)

**615. ADVANCED FINANCIAL MGT. IN HOSPITALITY.** This course provides students both conceptual understanding of financial management and practical use of financial statements by using structured analysis techniques in the hospitality industry. The structure and sequence of topics was carefully planned to serve as a basis to develop knowledge and understanding of financial management methods for analyzing the benefits of various sources of finance and capital investment opportunities, and of the application of management accounting techniques for business planning and control. Prerequisite: Fin 331 or NHM 467. (3)

**617. ADVANCED FOODSERVICE MANAGEMENT.** Strategic application of principles of management and systems in foodservice operations to individuals and organizations. (3)

**618. MATERNAL, CHILD, & ADOLESCENT NUTRITION.** Principles of human nutrition applied to pregnancy and the infant/child and adolescent stages of the life cycle. Characteristics of normal growth and development are presented as well as special needs and problems. Prerequisite requirement for this course may also be satisfied by equivalent course work as approved by the department. Prerequisite: NHM 311 with minimum grade of C. (3)



**619. SPORTS NUTRITION.** This course explores the relationship between nutrition, exercise, and sports activities for athletics of recreational to elite levels. Topics will cover the biological, psychological, and sociological aspects of nutrition as it relates to fitness performance across the life span. Current topics in sports nutrition will also be discussed. Prerequisite: NHM 311, Bisc 206 or Bisc 330. (3)

**620. LEADERSHIP DIETETICS & HOSP MGT ORGANIZ.** Exposure to theories and their applications in the area of leadership and management of people, resources, information, and internal and external customers as they relate to dietetics, food service and hospitality management professions. Prerequisite: NHM 466, Graduate Program Level Only. (3)

**621. ADVANCED HUMAN DEVELOPMENT.** An in-depth exploration of the social processes, changes, experiences, and expectations that impact human relationships throughout the life span. Special emphasis placed on the relationship between human relationships and physical well-being across the life span. (3)

**622. NUTRITION POLICY.** An examination of public policy issues related to nutrition. Topics include food and nutrition assistance programs in the United States, global food and nutrition policy, community-based nutrition services, and policy development and evaluation. Prerequisite: a graduate-level statistics course. (3)

**623. NUTRITIONAL EPIDEMIOLOGY.** An advanced review of concepts and applications of nutritional epidemiology used in public health, community health, and clinical research. Prerequisite: Psy 603, Edrs 501, Soc 501, NHM 611, NHM 625. (3)

**624. ADVANCED MARKETING HOSPITALITY INDUSTRY.** A conceptual and theoretical understanding of marketing and its application using structured analysis techniques in the hospitality industry. The structure and sequence of topics explore and develop marketing environments, perform competitive analysis, determine market segments and positions, best use of marketing mix, utilize marketing research techniques and information systems, and apply marketing strategies and plans. Prerequisite: Mktg 351, Graduate Program Level Only. (3)

**625. RESEARCH I - PRINCIPLES OF RESEARCH.** Introduction to social and human science research in food, nutrition, and hospitality with primary focus on the development of research ideas, definition and measurement of variables, identification of research subjects, and development of sound research strategy and design. Prerequisite: Graduate Program Level Only. (3)

**626. RESEARCH II APPLICATION RESEARCH METHODS.** The study and application of concepts and techniques in empirical methods of analysis used for applied social and human science research in food, nutrition, and hospitality management. (3)

**627. TRENDS & TOPICS HOSPITALITY MANAGEMENT.** An analysis of current trends, topics and future projections influencing the field of hospitality management. Prerequisite: Graduate Program Level Only. (3)

**647. SEMINAR HOME MANAGEMENT.** (3)

**693. DIRECTED INDEPENDENT RESEARCH.** Practical experience in the organization and conduct of a research project and reporting of the results. Prerequisite: ES 625 or HP 625 or PRM 625 or Soc 501 or NHM 625. (1-6)

**697. THESIS.** Completion of a nutrition-focused thesis. Prerequisites: completion of core course requirements and with consent of advisor. Z grade. Prerequisite: Adviser approval required. (1-6)

**699. SUPERVISED PRACTICE.** This 36 week rotation in a variety of clinical, community and food service setting provides Coordinated Program in Dietetics students with opportunities to apply principles and knowledge addressed during their undergraduate and graduate curriculum and to participate directly in hands-on application of clinical, food service and community nutrition. Students will have opportunities to develop and improve a variety of skills, with emphasis in critical thinking, evaluation and assessment. Prerequisite: 18 hours of graduate credit. (3-12)

## **HEALTH, EXERCISE SCIENCE, AND RECREATION MANAGEMENT**

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Professor Mark Loftin, chair • 215 Turner Building

<http://www.olemiss.edu/depts/hesrm/>

Overview: The Department of Health, Exercise Science, and Recreation Management offers the following degrees: the Bachelor of Science in Exercise Science (B.S.E.S.), the Bachelor of Arts in Park and Recreation Management (B.A.P.R.M.), the Master of Arts (M.A.) in park and recreation management, the Master of Science (M.S.) in exercise science, the Master of Science (M.S.) in health promotion, and the Doctor of Philosophy (Ph.D.) in health and kinesiology.

Accreditation: The Park and Recreation Management program is accredited by the National Recreation and Park Association.

Preliminary Requirements: Admission is competitive, limited in number, and dependent upon availability of faculty mentors.

### **M.A. in Park and Recreation Management**

Description: The M.A. in park and recreation management degree program is designed to develop leisure service delivery skills and form a solid knowledge base preparatory to leadership and supervisory roles for a variety of leisure service industries, including municipal, outdoor, therapeutic, military, church, youth, commercial/tourism, and industrial.

Course Requirements: For the M.A. in park and recreation management, a minimum of 33 semester hours of graduate study are required, which shall include the following:

#### Core Curriculum (18 hours)

PRM 600-Issues and Trends in Park and Recreation Programs  
PRM 601-Park and Recreation Program Development and Promotion  
PRM 602-Assessment and Evaluation of Park and Recreation Programs  
PRM 625-Research Design and Evaluation  
PRM 680-Leisure Programming for Senior Adults  
500-600-Statistics (adviser approved)

#### Nonthesis Option (15 hours)

PRM 653-Independent Research  
PRM 654-Directed Event Programming  
9 hours approved electives

#### Thesis Option (15 hours)

PRM 697-Thesis (6 hours)  
9 hours approved electives

Other Academic Requirements: Students who have not completed an internship or who lack professional work experience within the park and recreation field will complete a 3-hour internship (PRM 627) as one of the electives within the degree program.

### **M.S. in Health Promotion**

Description: The M.S. in health promotion enables a student to participate in research projects involving exercise behavior, injury prevention, and health promotion, from individual, workplace, and community perspectives.

Course Requirements: For the M.S. in health promotion, a minimum of 33 hours of graduate study are required. Included in the 33-hour curriculum is an 18-hour core and one of two 15-hour options (internship or thesis).

Core Curriculum (18 hours)

HP 600-Foundations of Health Promotion (3)

HP 605-Health Promotion Planning (3)

HP 615-Personal Health Promotion (3)

HP 625-Research Design and Evaluation (3)

HP 635-Advances in Health (3)

HP 645-Organization and Administration of Health Promotion Programs (3)

Internship Option (15 hours)

HP 627-Internship in Health Promotion (9)

Approved electives (6)

Thesis Option (15 hours)

HP 697-Thesis (6)

Statistics (adviser approval) (3)

Approved electives (6)

### **M.S. in Exercise Science**

Description: The M.S. in exercise science prepares students for careers in fitness and allied health and research. The degree also prepares students for advanced study at the doctoral (Ph.D.) level.

Course Requirements: For the M.S. in exercise science, a minimum of 33 semester hours of graduate study is required. Requirements for the M.S. in exercise science are a minimum of 18 hours in either the exercise physiology or neuromechanics emphasis area, to include the 12 core hours, 6 hours of research design and statistics, a minimum of 3 hours of electives, and either 3 hours of independent research or 6 hours of thesis or 9 hours of internship.

**Exercise Physiology Emphasis** (18 hours)

ES 611-Exercise Physiology I\* (core) (3)

ES 613-Health Aspects of Physical Activity (3)

ES 608-Methods and Procedures of Graded Exercise Testing (core) (3)

ES 614-Cardiovascular Physiology (core) (3)

ES 615-Physiological Aspects of Aging (3)

ES 616-Exercise Physiology II (3)

ES 618-Advanced Muscle Physiology (core) (3)

ES 620-Selected Topics in Exercise Science (3)

Electives (3-6 hours)

ES 651-Advanced Individual Study (3)

ES 652-Advanced Individual Study (3)

Any course(s) from the neuromechanics emphasis area (3-6)

Non-ES course (advisor approved) (3)

Research and Statistics (6 hours)

ES 625-Research Design and Evaluation (3)

ES 652-Statistics (advisor approved) (3)

Practical Training Requirement (3-9 hours)

ES 610-Internship in Exercise Science (9)

ES 697-Thesis (6)

ES 653-Independent Research (3)

\*Requires completion of equivalent undergraduate level course or approval of instructor.

**Neuromechanics Emphasis** (18 hours)

ES 512-Foundations of Biomechanics\* (core) (3)

ES 514-Applied EMG (3)

ES 609-Motor Behavior (core) (3)

ES 612-Instrumentation and Analysis in Biomechanics (3)

ES 620-Selected Topics in Exercise Science (3)

ES 632-Advanced Structural Kinesiology (core) (3)

ES 644-Control of Human Movement (core) (3)

ES 648-Biomechanics of Injury (3)

Electives (3-6 hours)

ES 651-Advanced Individual Study (3)

ES 652-Advanced Individual Study (3)

Any course(s) from the exercise physiology emphasis area (3-6)

Non-ES course (advisor approved) (3)

Research and Statistics (6 hours)

ES 625-Research Design and Evaluation (3)

ES 652-Statistics (advisor approved) (3)

Practical Training Requirement (3-9 hours)

ES 610-Internship in Exercise Science (9)

ES 697-Thesis (6)

ES 653-Independent Research (3)

\*Requires completion of equivalent undergraduate level course or approval of instructor.

### **Ph.D. in Health and Kinesiology**

Description: The Ph.D. in health and kinesiology has two emphasis areas: health behavior and promotion and exercise science.

Course Requirements: The course requirements are listed under each emphasis.

Other Academic Requirements: All students must complete written and oral comprehensive exams before undertaking the prospectus and dissertation.

### **Emphasis in Health Behavior and Promotion**

Description: The emphasis in health behavior and promotion prepares students for university teaching and research, and positions in public, private, and international health.

Course Requirements: The course requirements are 12 hours of major course work, 9 hours of advanced research methods and seminar, 9 hours of statistics and research design, 9 hours of supporting course work, and 18 hours of dissertation.

Additional Academic Requirements: Additional course work will be required for students who do not enter the program having completed a master's-level degree in health promotion, health education, public health, or closely related discipline.

### **Emphasis in Exercise Science**

Description: The emphasis in exercise science prepares students for university teaching and research positions. Also, the degree prepares students for research careers in industry and medicine that include the study of exercise.

Course Requirements: The course requirements are 18 hours in an exercise science specialty area (selected from either exercise physiology or neuromechanics); 9 hours of research methods and statistics; 12 hours of supporting course work; and 18 hours of dissertation. The specific courses used to satisfy the above requirements must be approved by a student's adviser.

Additional Academic Requirements: Additional course work will be required for students who do not enter the program having completed a master's-level degree in exercise science or closely related discipline.

### **Exercise Science-ES**

**512. FOUNDATIONS OF BIOMECHANICS.** Biomechanical bases of human movement, focusing on the mechanical interaction between the human body and the external environment. Prerequisite: ES 446, ES 447. (3)

**514. APPLIED ELECTROMYOGRAPHY.** Introduction to the theoretical basis and practical application of electromyography (EMG) in the study of human motion. Topics include the electrophysiological basis of muscle actions and the EMG, mechanical properties of muscle, EMG recording and processing methods, and applications of EMG to the study of human motion. A lecture/discussion format will be used in conjunction with complementary laboratory demonstrations and exercises. Students are fully expected to contribute to lecture discussions of assigned readings and relevant topics. Prerequisite: Instructor Approval Required. (3)

**542. SPORTS PSYCHOLOGY.** Examination of motivation, personality, and other personal performance-related issues affecting sports. (3)

**544. THE AMERICAN WOMAN IN SPORTS.** A comprehensive, multidisciplinary analysis of the problems, patterns, processes, and potentials associated with the sport involvement of women in our culture. (3)

**548. BIOMECHANICS OF INJURY.** This course is designed to introduce the student to the biomechanics of the materials that comprise the body and to analyze the response of the body to external forces as a method of predicting and evaluating injuries. Prerequisite: ES 446 or ES 512. (3)

**574. SELECTED PROBLEMS IN SPECIAL POPULATIONS** Selected problems confronting individuals with special needs in the areas of physical development, therapeutic activities, physiological performance, and leisure management. Prerequisite: ES 394. (3)

**608. METHODS & PROCEDURES OF GRADED EXERCISE.** Methods, procedures, and techniques of diagnostic and functional graded exercise testing. Aptitude regarding referral procedures, data

interpretation, contraindications, protocols, equipment, and follow-up procedures regarding graded exercise testing. (3)

**609. MOTOR BEHAVIOR.** A theoretical and practical focus upon the improvement of human motor performance and development of perceptual-motor skills. (3)

**610. INTERNSHIP IN EXERCISE SCIENCE.** Supervised laboratory experience, program development, and leadership techniques related to exercise science consisting of 600 contact hours. Prerequisite: Instructor Approval Required. (3-9)

**611. EXERCISE PHYSIOLOGY I.** The effects of exercise on the function of the organic systems of the body. Prerequisite: ES 348, ES 349. (3)

**612. INSTRUMENTATION & ANALYSIS IN BIOMECHANICS.** Methods and procedures of using biomedical research equipment in biomedical research. (3)

**613. HEALTH ASPECTS OF PHYSICAL ACTIVITY.** An examination of the role of physical activity as it relates to health status with an emphasis on the use of exercise in mediating risk factors, and a critical analysis of the exercise epidemiological literature. (3)

**614. CARDIOVASCULAR PHYSIOLOGY.** In-depth study of the cardiovascular/cardiorespiratory system and its various responses to physical stress. (3)

**615. PHYSIOLOGICAL ASPECTS OF AGING.** A survey of the physiological consequences of normal aging and pathophysiological deviations from the normal aging process. (3)

**616. EXERCISE PHYSIOLOGY II.** A continuation of Exercise Physiology I to include advanced study of the physical, biochemical, and environmental factors influencing physical performance. Includes critical environmental factors influencing physical performance. Includes critical analyses of current topics and laboratory investigation and demonstration. (3)

**618. ADVANCED MUSCLE PHYSIOLOGY.** An in-depth study into human skeletal muscle structure and function with reference to exercise-induced plasticity, peak performance, age-related sarcopenia, and clinical pathologies. Prerequisite: ES 348, ES 611. (3)

**620. SELECTED TOPICS IN EXERCISE SCIENCE.** Topics of current interest, both experimental and theoretical. Repeatable. (3)

**625. RESEARCH DESIGN AND EVALUATION.** Basic research design and application toward conducting research and evaluations in wellness, park and recreation management, and exercise science. Emphasizes the interdisciplinary nature of health-related research and focuses on understanding research design. (3)

**632. ADVANCED STRUCTURAL KINESIOLOGY.** Clinically oriented advanced applied anatomy. Advanced analysis of human functional anatomy, primary emphasis on articular, skeletal, muscular, and nervous systems; specifically related to exercise science and prescription. Integrated discussions of physiological and biomechanical aspects of human movement for disciplines ranging from physical therapy and rehabilitation to biomechanics. Prerequisite: Bisc 206. (3)

**644. CONTROL OF HUMAN VOLUNTARY MOVEMENT.** Review of basic anatomy and function of central and peripheral nervous system involved in controlling human voluntary movement. Clinical and physiological discussions from physical therapy and rehabilitation to motor control and neuromechanics. (3)

**650. SEMINAR IN EXERCISE SCIENCE.** Lectures by faculty, visiting lecturers, and graduate students. Z grade. (1)

**651. ADVANCED INDIVIDUAL STUDY.** Development of special projects under supervision. Prerequisite: Instructor Approval Required. (1-6)

**652. ADVANCED INDIVIDUAL STUDY.** Development of special projects under supervision. Prerequisite: Instructor Approval Required. (1-3)

**653. INDEPENDENT RESEARCH.** Practical experience in the organization and conduct of a research project and reporting of the results. Prerequisite: ES 625 , Instructor Approval Required. (3)

**655. PROBLEMS IN PE/HEALTH EDUCATION.** (3)

**697. THESIS.** No grade. (1-12)

**750. ADVANCED SEMINAR IN EXERCISE SCIENCE.** Lectures by faculty, visiting lecturers, and graduate students. May be repeated for credit as required by department. Z grade. (1)

**Espr**

**797. DISSERTATION.** Z grade. (1-18)

**Health Promotion-HP**

**506. CURRENT TOPICS.** . (3)

**600. FOUNDATIONS OF HEALTH PROMOTION.** Designed to prepare prospective directors, managers, and administrators for leadership in health promotion settings. Technical and conceptual skills of leadership will be discussed and applied toward health promotion programs in industry, hospital, and health agencies. Historical and philosophical foundations of health promotion focusing on the principles of the discipline and preparation for service as a professional. Professional ethical issues are considered. (3)

**605. HEALTH PROMOTION PLANNING.** Integration and understanding of health promotion assessment, and intervention strategies in contemporary health issues. Competency development in formulating and implementing health programs; includes understanding community organization and sustaining programs. (3)

**615. PERSONAL HEALTH PROMOTION.** An advanced study of personal health promotion; information, skills, theory, and practice in assisting clients develop health-related life skills. (3)

**625. RESEARCH DESIGN AND EVALUATION.** Basic design and application toward conducting research and evaluations in health promotion, park and recreation management, and exercise science. Emphasizes the interdisciplinary nature of health-related research and focuses on understanding research design. (3)

**626. STATISTICAL ANALYSIS I.** An introduction to descriptive and inferential statistical techniques with a particular emphasis on conceptual, computational, and computer applications in health, exercise science and recreation management. (3)

**627. INTERNSHIP IN HEALTH PROMOTION.** Full-time supervised field experience in an approved health promotion setting. Prerequisite: Instructor Approval Required. (9)

**635. THEORIES IN HEALTH PROMOTION.** Selected health behavior theories and their application to the practice of health promotion will be covered. Using a social ecological framework, we examine theories, research, and interventions that aim to promote the health of individuals, communities, and populations. (3)

**645. ORGANIZATION & ADMIN. OF HEALTH PROMOTIO.** Emphasis on designing, implementing, and administering health promotion programs. Development and management of fiscal resources, human resources, grant management, procedures for requests for proposals, and requests for applications. Student will also learn how to exercise organizational leadership, and how to obtain acceptance and support for health promotion programs. (3)

**646. INTRODUCTION TO EPIDEMIOLOGY.** An introduction to epidemiology, including factors governing health and disease. The course will focus on demographics, distribution, etiology and patterns of disease, disability, or physiological conditions within populations. (3)

**651. ADVANCED INDEPENDENT STUDY.** Development of special projects under supervision. (1-3)

**652. ADVANCED INDIVIDUAL STUDY.** Development of special projects under faculty supervision. Z grade. Prerequisite: Instructor Approval Required. (1-3)

**653. INDEPENDENT RESEARCH.** Practical experience in the organization and conduct of a research project and reporting of the results. Prerequisite: HP 625, Instructor Approval Required. (1-3)

**665. SPECIAL TOPICS IN HEALTH BEHAVIOR.** This course is designed to provide a concise review and interpretation of the health-behavior research and theoretical writing. (3)

**675. ADVANCED THEORETICAL APPL HLTH BEHAVIOR.** This course focuses on the theoretical underpinnings of health behavior and health promotion strategies. Factors related to the initiation,

maintenance, and change of health behaviors are reviewed in depth, and application of these principles to health promotion with individuals, groups, and communities are presented. (3)

**685. PROGRAM EVALUATION IN HEALTH BEHAVIOR.** This course examines the methods used by health-promotion professionals to determine how and why health behavior programs work. Focus is on formative, process, impact, and outcome evaluation methods. Qualitative and quantitative analysis techniques used for assessing program process and effects are discussed. (3)

**695. HUMAN HEALTH AND ILLNESS.** Major causes of premature death and the relationship of health behaviors to these causes. Includes special populations, hard-to-reach populations, health policy and economics. (3)

**697. THESIS.** No grade. (3-6)

**750. SEMINAR IN HEALTH PROMOTION.** This course is designed to foster the development of applied research skills in health promotion and to create an opportunity for a supportive scholarly community. May be repeated for credit. (1)

**797. DISSERTATION.** Dissertation. (1-18)

### **Park and Recreation Management-PRM**

**473. SUPERVISION AND ADMINISTRATION OF THERAP.** Processes of therapeutic recreation delivery to include procedures for assessment, program planning, implementation, documentation, and evaluations. The supervision and administration of therapeutic recreation programs on the institutional, community, and interdisciplinary levels. Prerequisite: PRM 262, Pre-requisites: PRM 362 and PRM 472 , Senior or above standing required. (3)

**510. ENTREPRENEURIAL RECREATION.** Applications of small business management practices to private recreation and park enterprises. Prerequisite: PRM 471. (3)

**539. OUTDOOR RESOURCES MANAGEMENT.** Principles of development and management of natural resources, visitors, and maintenance services of outdoor recreation areas. (3)

**569. STRATEGIES & APPLICATIONS IN OUTDOOR EDU.** A focus on the application of selected outdoor instructional strategies for use in the areas of recreation and education. (3)

**574. CURRENT TRENDS IN THERAPEUTIC RECREATION.** Contemporary issues, problems, and trends in the field of therapeutic recreation. Prerequisite: PRM 262, PRM 372, Instructor Approval Required. (3)

**600. ISSUES & TRENDS IN PARK & RECREATION PRO.** Discussions of current research and specialized topics in recreation; presentation of papers by students, faculty, and visiting lecturers. (3)

**601. PARK & RECREATION PROGRAM DEV & PROMOTIO.** An overview of service marketing as applied to the park and recreation industry. (3)

**602. ASSESSMENT & EVALUA. OF PARK & REC. PROG.** Assessment and evaluation concepts, approaches and methods used in park, recreation, and leisure programming. (3)

**625. RESEARCH DESIGN AND EVALUATION.** Basic research design and application toward conducting research and evaluations in wellness, park and recreation management, and exercise science. Emphasizes the interdisciplinary nature of health-related research and focuses on understanding research design. (3)

**627. INTERNSHIP.** Z grade. (3)

**650. SEMINAR IN COMMUNITY & RURAL TOURISM.** Exploration of the major concepts of tourism to discover what makes community and rural tourism work, how tourism is organized, methods of research in tourism, and its social and economic effects. Prerequisite: PRM 471. (3)

**651. ADVANCED INDEPENDENT STUDY.** Special projects in recreation and leisure studies. (3)

**652. ADVANCED INDEPENDENT STUDY.** Special projects in recreation and leisure studies. (3)

**653. INDEPENDENT RESEARCH.** Design and effectuation of a research project. Prerequisite: PRM 625. (3)

**654. DIRECTED EVENT PROGRAMMING.** Experiential opportunities for the planning, development, supervision, and leadership of a recreation program. (3)



**671. PARK & RECREATION PROGRAM ADMIN.** Effective recreation service to the community, legal aspects, finance, agencies, public relations, programs, and facilities. (3)

**680. LEISURE PROGRAMMING FOR SENIOR ADULTS.** A study of the unique recreation and leisure needs of the mature adult; how to contend with the intervening aspects of aging, and how to program for this population in municipal, institutional, and residential settings. (3)

**691. PRINCIPLES & PRACTICES OF LEISURE & RECR.** Foundations of recreation and leisure, the social and economic backgrounds of current viewpoints concerning recreation. (3)

**697. THESIS.** No grade. (1-6)

## **LEGAL STUDIES**

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Professor Stephen L. Mallory, chair • Odom Hall

<http://www.olemiss.edu/depts/legalstudies/>

Overview: The Department of Legal Studies offers a Bachelor of Paralegal Studies (B.P.S.), a Bachelor of Science of Criminal Justice (B.S.C.J.), and a Master of Criminal Justice (M.C.J.).

### **Master of Criminal Justice (M.C.J.)**

Description: The M.C.J. provides the justice practitioner with academic training beyond the bachelor's degree to enhance skills as criminal justice and homeland security professionals. Two emphases are offered: homeland security and criminal justice.

Preliminary Requirements: An applicant for the M.C.J. must submit a satisfactory score on the Graduate Record Examination (GRE) and three letters of recommendation. Admission is competitive, limited in number, and dependent upon availability of faculty members. An applicant must have completed an undergraduate major in criminal justice or a related field, or complete the prerequisite undergraduate course work before entering the graduate program.

Course Requirements: The M.C.J. is a 36-graduate-hour program. Students are required to complete a thesis (6 hours) or complete a criminal justice practicum (6 hours). All students must complete the core courses (12 hours), emphasis area courses (9 hours from either the criminal justice or homeland security emphasis course set), and approved electives (9 hours).

#### Core Courses:

CJ 500-Criminal Justice Administration  
CJ 635-Criminal Justice Research Methods  
CJ 645-Criminal and Intelligence Analysis  
CJ 655-Criminal Justice Statistical Analysis

Emphasis Courses: 9 hours from either emphasis areas

Electives and Thesis/Practicum: Students must have a minimum of 9 hours of electives from the courses included in this program or graduate courses approved by the M.C.J. program director. Students must complete a thesis (CJ 697, 6 hours) or a practicum course (CJ 690, 3 hours).

Other Academic Requirements: Students must pass a comprehensive examination in the emphasis area during the last semester of course enrollment.

### **Emphasis in Criminal Justice**

Description: The M.C.J. with emphasis in criminal justice prepares a graduate for a variety of law enforcement positions in local, state, and federal agencies.

Course Requirements: The M.C.J. degree with emphasis in criminal justice requires completion of the following courses, in addition to the core, elective, and thesis/practicum courses.

CJ 620-Criminal Justice in American Society

CJ 625-Criminal Justice Theory

CJ 640-Legal Issues in Criminal Justice

CJ 660-Operational and Staff Planning

### **Emphasis in Homeland Security**

Description: The M.C.J. with emphasis in homeland security provides specific training related to protection of our society and its institutions from both domestic and international threats.

Course Requirements: The M.C.J. degree with emphasis in homeland security requires completion of the following courses, in addition to the core, elective, and thesis/practicum courses.

CJ 610-Homeland Security Operations

CJ 630-Terrorism: Asymmetrical Conflict

CJ 650-Terrorism and Homeland Security

CJ 670-Intelligence and Homeland Security

### **Criminal Justice-CJ**

**500. CRIMINAL JUSTICE ADMINISTRATION.** Lecture, discussion, and analysis of theories, and concepts of administration of justice. Prerequisite: Criminal Justice Majors Only. (3)

**510. EMERGENCY MANAGEMENT.** The course will also analyze the duties and responsibilities of the emergency manager and the role of federal, state and local government in the emergency management process. (3)

**610. HOMELAND SECURITY OPERATIONS.** An examination of issues pertaining to the role and mission of the Department of Homeland Security and related agencies, both domestically and internationally. Prerequisite: CJ 500. (3)

**615. TRANSNATIONAL ORGANIZED CRIME.** This course will examine the origins and development of organized crime in America. The course will consist of lectures, discussions, as well as guest speakers. Films on organized crime and its activities will be shown frequently during the course as well. The student will become familiar with the various organized crime groups, their method of operations, history, structure, activities, and the law enforcement response to their activity. The course will include review of current activity of organized crime, films, and readings assigned to students. Prerequisite: Must be admitted to the M.C. J. degree program. (3)

**620. CRIMINAL JUSTICE IN AMERICAN SOCIETY.** Examination of the role of CJ agencies in our society and skills required for effective organizational leadership and strategic thinking by which performance-based organizational cultures are developed. Prerequisite: CJ 500. (3)

**625. CRIMINAL JUSTICE THEORY.** Insight/appreciation into the origins of theories and how theories work, the extent to which theories are grounded in human experience and serve human interest. Prerequisite: CJ 500. (3)

**630. TERRORISM: ASYMMETRICAL CONFLICT.** An examination of crisis prevention and crisis response planning essential to effective professional administration. Prerequisite: CJ 500. (3)

**635. CRIMINAL JUSTICE RESEARCH METHODS.** An overview of methods and techniques of criminal justice research and data collection. Prerequisite: CJ 450. (3)

**640. LEGAL ISSUES IN CRIMINAL JUSTICE.** Examination of current issues in criminal justice administration: hiring personnel, personnel issues, contracts, effective training, job education and employee discipline. Prerequisite: CJ 500. (3)

**645. CRIMINAL AND INTELLIGENCE ANALYSIS.** An examination of the discipline of criminal analysis and its application to complex criminal investigations. Prerequisite: CJ 500. (3)

**650. TERRORISM AND HOMELAND SECURITY.** An examination of facts of terrorism, methods of terrorism, goals of terrorism from a homeland security/terrorism deterrence approach. Prerequisite: CJ 500. (3)

**655. CRIMINAL JUSTICE STATISTICAL ANALYSIS.** Application of a variety of statistical methods/tests to the field of criminal justice. Prerequisite: CJ 450. (3)

**660. OPERATIONAL AND STAFF PLANNING.** An examination of the process of problem identification, analysis, resource assessment, course action development and solution implementation through use of staff. Prerequisite: CJ 500. (3)

**665. TRANSPORTATION AND BORDER SECURITY.** This course provides students with analysis concerning the protection of U.S. borders and policies regarding safety of the U.S. transportation system. The course analyzes the changes in security arrangements from the pre- to post- 9/11 policies, relative to border and transportation security. The course will examine the Maritime Transportation Security Act as it pertains to homeland security. Drugs and immigration with regard to homeland security will also be addressed. Prerequisite: Must be admitted to the M.C. J. degree program. (3)

**670. INTELLIGENCE AND HOMELAND SECURITY.** Advanced course on intelligence and counterintelligence aspects of homeland security as they relate to domestic security, emergency, preparedness, technology policy, and timely intelligence for improved policymaking. Prerequisite: CJ 500. (3)

**675. TOPICS IN JUDICIAL ADMINISTRATION.** Examination of current problems and practice trends in the administration of the judicial process from the perspective of state/local officials charged with making the legal system work. Prerequisite: CJ 500. (3)

**685. SPECIAL TOPICS IN JUSTICE STUDIES.** A study of current issues, opportunities, and challenges of the American criminal justice system. May be repeated once. Prerequisite: CJ 500. (3)

**690. CRIMINAL JUSTICE PRACTICUM.** Practicum that applies problem solving while the student works with an approved criminal justice agency. A comprehensive paper will be prepared by the student and submitted for approval. Z grade. (6)

**695. INDEPENDENT STUDY.** Each student in this class successfully achieve their specific learning objectives for the course and enjoy the academic experience presented in CJ 695 during the semester. This course is designed to enhance both writing and research skills of graduate students and to develop student expertise in a specific subject area. May be repeated once for credit. Prerequisite: Consent of Department Chairperson Required, 12 hours of Criminal Justice courses and overall GPA of 3.0 or higher. (3)

**697. THESIS.** Research thesis in homeland security or criminal justice. Z grade. (1-6)

## **SOCIAL WORK—SW**

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Professor Carol M. Boyd, chair • 208 Longstreet Hall

<http://www.olemiss.edu/depts/socialwork/>

Overview: The Department of Social Work offers the Bachelor of Social Work (B.S.W.) and Master of Social Work (M.S.W.) degrees.

Accreditation: The program received candidacy status from the Council on Social Work Education.

**Master of Social Work (M.S.W.)**

Description: The M.S.W. is a professional degree that prepares students to work with individuals, families, groups, organizations, and communities in clinical settings. Students pursue either a regular track or advanced standing track, depending on their education.

Preliminary Requirements: Students are admitted to the M.S.W. program on either a regular admission track or on an advanced standing track. In addition to meeting regular Graduate School requirements, students seeking regular admission to the M.S.W. program must meet or submit the following:

- Resume, personal autobiographical statement, essay, three letters of recommendation, and background check

In addition, students seeking admission to the advanced standing program for the M.S.W. must meet the following:

- 3.0 GPA on the last 60 hours of undergraduate course work
- 3.0 overall GPA
- Completion of B.S.W. degree from a CSWE-accredited program within the last five years

Prospective students should understand that admission to the M.S.W. program is competitive, with slots limited in number and dependent upon the availability of faculty. Meeting the above requirements does not guarantee admission.

No academic credit is given for life experience or previous social work experience.

Goals/Mission Statement: To prepare competent and ethical clinical social workers, for scientific inquiry, who are leaders committed to diversity, social and economic justice, and the enrichment of the quality of life, with systems of all sizes, at every level of society.

General Education Course Requirements: Completion of the following liberal arts courses: English composition, history, political science, statistics, psychology, sociology, human biology, and 9 hours of electives in the social or behavioral sciences.

Course Requirements: Students must complete the requirements for either the regular track or advanced standing track.

**M.S.W. Regular Track**

Description: The regular track M.S.W. program is designed for students who do not enter the program with a B.S.W. degree from a CSWE-accredited program within the past five years.

Course Requirements: Students in the regular track for the M.S.W. must complete 60 hours of social work courses, including a set of 24 hours of foundation courses, 30 hours of clinical practice courses, and 6 hours of electives (from among the set of listed courses). No thesis or final oral examination is required.

Foundation Curriculum (24 hours):

- SW 601-Human Behavior and the Social Environment (3)
- SW 602-Social Work Practice with Individuals (3)
- SW 603-Social Work Research Methods (3)
- SW 604-Social Welfare Policies and Programs (3)
- SW 615-Practice with Families and Groups (3)
- SW 620-Practice with Organizations and Communities (3)
- SW 621-Field Instruction I [225 hours] (3)

SW 622-Field Instruction II [225 hours] (3)

Concentration Area—Clinical Practice (30 hours):

SW 630-Theories and Methods of Family Intervention (3)

SW 640-Advanced Practice with Groups (3)

SW 650-Clinical Assessment and Diagnosis (3)

SW 660-Clinical Supervision (3)

SW 680-Evaluation Research (3)

SW 683-Theories of Psychotherapy (3)

SW 686-Traumatic Stress and Crisis Intervention (3)

SW 687-Substance Abuse and Addiction (3)

SW 623-Field Instruction III [225 hours] (3)

SW 624-Field Instruction IV [225 hours] (3)

Electives (6 hours):

SW 670-Leadership and Administration (3)

SW 681-Forensic Social Work with Children (3)

SW 682-Clinical Practice in Child Welfare (3)

SW 684-Social Work in Health Care Settings (3)

SW 685-Gerontological Social Work (3)

### **M.S.W. Advanced Placement Track**

Description: The advanced placement track for the M.S.W. is designed for highly qualified students who have completed a B.S.W. from a CSWE-accredited program within the past five years.

Course Requirements: Students in the advanced placement track for the M.S.W. must complete 36 hours of social work courses, 30 hours of clinical practice courses, and 6 hours of electives (from among the set of listed courses). No thesis or final oral examination is required.

Clinical Practice (30 hours):

SW 630-Theories and Methods of Family Intervention (3)

SW 640-Advanced Practice with Groups (3)

SW 650-Clinical Assessment and Diagnosis (3)

SW 660-Clinical Supervision (3)

SW 680-Evaluation Research (3)

SW 683-Theories of Psychotherapy (3)

SW 686-Traumatic Stress and Crisis Intervention (3)

SW 687-Substance Abuse and Addiction (3)

SW 623-Field Instruction III [225 hours] (3)

SW 624-Field Instruction IV [225 hours] (3)

Electives (6 hours):

SW 670-Leadership and Administration (3)

SW 681-Forensic Social Work with Children (3)

SW 682-Clinical Practice with Children (3)

SW 684-Social Work in Health Care Settings (3)

SW 685-Gerontological Social Work (3)

## **Social Work-SW**

**575. PSYCHOSOCIAL ASPECTS OF AGING.** Introduction to gerontology with a foundation in biological, psychosocial, and behavioral aspects of aging; emphasis on current research and experience working with older adults. (Same as Psy 575). (3)

**601. HUMAN BEHAVIOR IN THE SOCIAL ENVIRONMENT.** Knowledge of reciprocal relationships between human behavior and social environments. Theories and knowledge on interactions between and among individuals, families, groups, societies, and economic systems are discussed. Prerequisite: Admission to the MSW Program Required. (3)

**602. SOCIAL WORK PRACTICE WITH INDIVIDUALS.** Basic theory, professional values and ethics and methods of social work practice with individuals along with assessment and planning, communication, intervention, and evaluation skills. Prerequisite: Admission to the MSW Program Required. (3)

**603. SOCIAL WORK RESEARCH METHODS.** Research methodologies with respect to evolution and application to social work theory and practice are covered. History and philosophies of science; problem formulation, research design, ethics; instrument use and construction; data collection; analysis and reporting; and evaluation and utilization of research. Prerequisite: Admission to the MSW Program Required. (3)

**604. SOCIAL WELFARE POLICIES AND PROGRAMS.** Historical perspective on the development of social welfare institutions, programs, and policies are addressed. Students will learn methods of current policy analysis and evaluation of social problems. Prerequisite: Admission to the MSW Program Required. (3)

**615. PRACTICE WITH FAMILIES AND GROUPS.** Generalist practice with family and small group systems is the focus of this course. Ecological theory to frame understanding of such systems and their adaptation to environments and various social work roles and intervention strategies pertaining to client systems. Prerequisite: Admission to the MSW Program Required. (3)

**620. PRACTICE WITH ORGANIZATIONS/COMMUNITIES.** Basic theory, methods, problems, and strategies in implementing planned change within and among larger social systems: task groups, human service organizations, and community systems. Various practice roles: planner, program developer, supervisor, administrator, advocate, and task group leader. Prerequisite: Admission to the MSW Program Required. (3)

**621. FIELD INSTRUCTION I.** The internship experience consists of a minimum of 225 hours of directed practicum in an approved social service setting with individuals, families, groups, formal organizations, and communities. This course also includes a 3 hour seminar that will meet monthly. Prerequisite: SW 601 with minimum grade of C, SW 602 with minimum grade of C, SW 603 with minimum grade of C, SW 604 with minimum grade of C, SW 615 with minimum grade of C, SW 620 with minimum grade of C. (3)

**622. FIELD INSTRUCTION II.** The second of two foundation courses that require a minimum of 225 hours of directed practicum experience. This course also includes a 3 hour seminar that will meet monthly. Prerequisite: SW 601 with minimum grade of C, SW 602 with minimum grade of C, SW 603 with minimum grade of C, SW 604 with minimum grade of C, SW 615 with minimum grade of C, SW 620 with minimum grade of C. (3)

**623. FIELD INSTRUCTION III.** One of two concentration courses providing a minimum of 225 hours of internship experience. Prerequisite: SW 621 with minimum grade of C, SW 622 with minimum grade of C, SW 630 with minimum grade of C, SW 640 with minimum grade of C, SW 650 with minimum grade of C. (3)

**624. FIELD INSTRUCTION IV.** This course is one of two concentration courses that provide an internship experience consisting of a minimum of 225 hours of directed practicum in settings representative of student areas of concentration in communities with diverse populations. Prerequisite: SW 623 with minimum grade of C, SW 683 with minimum grade of C, SW 686 with minimum grade of C, SW 687 with minimum grade of C. (3)

**630. THEORIES AND METHODS OF FAMILY INTERVENT.** Understanding and analyzing family dynamics and interactional patterns from the perspective of major family therapy models. Intervention,

theories, methods, and skills for problem resolution. Prerequisite: SW 601 with minimum grade of C, SW 602 with minimum grade of C, SW 603 with minimum grade of C, SW 604 with minimum grade of C, SW 615 with minimum grade of C, SW 620 with minimum grade of C. (3)

**640. ADVANCED CLINICAL SOCIAL WORK: GROUPS.** Theoretical and historical approaches to social work with groups and clinical principles supporting specific types of group work used in clinical practice and associated leader interventions. Prerequisite: SW 601 with minimum grade of C, SW 602 with minimum grade of C, SW 603 with minimum grade of C, SW 604 with minimum grade of C, SW 615 with minimum grade of C, SW 620 with minimum grade of C. (3)

**641. READINGS IN ADVANCED SOCIAL WORK.** (3)

**650. CLINICAL ASSESSMENT AND DIAGNOSIS.** This course will provide students with the knowledge and skills needed for the diagnostic assessment and treatment of adults and youths with psychiatric problems and with information on psychotropic medications utilized in mental health settings. Prerequisite: SW 601 with minimum grade of C, SW 602 with minimum grade of C, SW 603 with minimum grade of C, SW 604 with minimum grade of C, SW 615 with minimum grade of C, SW 620 with minimum grade of C. (3)

**651. INDIV STUDY PROJECT.** (3)

**660. CLINICAL SUPERVISION.** Interactive and clinical supervisory skills that social workers need for supervision and consultation in the clinical setting are covered. The students will examine the dynamics of the supervisory relationship and supervisor roles. Prerequisite: SW 601 with minimum grade of C, SW 602 with minimum grade of C, SW 603 with minimum grade of C, SW 604 with minimum grade of C, SW 615 with minimum grade of C, SW 620 with minimum grade of C. (3)

**670. LEADERSHIP & ADMINISTRATION.** Management practices and leadership skills required in development and management of human services delivery systems. Issues regarding human resources management, resource allocation, strategic planning and organizational dynamics are included.

Prerequisite: SW 621 with minimum grade of C, SW 622 with minimum grade of C, SW 630 with minimum grade of C, SW 640 with minimum grade of C, SW 650 with minimum grade of C. (3)

**680. EVALUATION RESEARCH.** History, philosophy, and issues, conceptual approaches, techniques and methods in practice and utilization of evaluation research as applied to development and evaluation of social work programs and policies. Prerequisite: SW 601 with minimum grade of C, SW 602 with minimum grade of C, SW 603 with minimum grade of C, SW 604 with minimum grade of C, SW 615 with minimum grade of C, SW 620 with minimum grade of C. (3)

**681. FORENSIC SOCIAL WORK WITH CHILDREN.** This course encompasses forensic social work with children and adolescents. The students will develop skills in court evaluations, court testimony, and the treatment of child/adolescent victims. Prerequisite: SW 621 with minimum grade of C, SW 622 with minimum grade of C, SW 630 with minimum grade of C, SW 640 with minimum grade of C, SW 650 with minimum grade of C. (3)

**682. CLINICAL PRACTICE IN CHILD WELFARE.** This course is intended to provide students with an advanced study of the field of child welfare and the complex and changing practice and policies within this specialized field. Focus will be upon the knowledge, skills, and values required in this critical area. The course will emphasize child welfare services for a diverse society. Prerequisite: SW 621 with minimum grade of C, SW 622 with minimum grade of C, SW 630 with minimum grade of C, SW 640 with minimum grade of C, SW 650 with minimum grade of C. (3)

**683. THEORIES OF PSYCHOTHERAPY.** This course is designed to familiarize students with therapeutic models and related intervention strategies by focusing on the common principles and elements of current psychotherapies, with a special emphasis on cognitive and behavioral therapeutic approaches. Prerequisite: SW 621 with minimum grade of C, SW 630 with minimum grade of C, SW 640 with minimum grade of C, SW 650 with minimum grade of C. (3)

**684. SOCIAL WORK IN HEALTH CARE SETTINGS.** Individual, group, and family approaches to social work practice in health care settings. Special emphasis on cross-cultural practice and ethical/legal issues, including managed care, health care insurance, Medicare and Medicaid. Prerequisite: SW 621 with

minimum grade of C, SW 622 with minimum grade of C, SW 630 with minimum grade of C, SW 640 with minimum grade of C, SW 650 with minimum grade of C. (3)

**685. GERONTOLOGICAL SOCIAL WORK.** This seminar provides an introduction to gerontology with a foundation in the biological, psychological, social, and behavioral aspects of aging. Emphasis will be on incorporating current research and experimental components in working with the aging population.

Prerequisite: SW 621 with minimum grade of C, SW 622 with minimum grade of C, SW 630 with minimum grade of C, SW 640 with minimum grade of C, SW 650 with minimum grade of C. (3)

**686. TRAUMATIC STRESS & CRISIS INTERVENTION.** This course explores the phenomenon of traumatic stress in relation to social work practice. Topics include clinical social work treatment of survivors of traumatic situations, posttraumatic stress disorder, secondary traumatic stress, vicarious traumatization and burnout. Prerequisite: SW 621 with minimum grade of C, SW 622 with minimum grade of C, SW 630 with minimum grade of C, SW 640 with minimum grade of C, SW 650 with minimum grade of C. (3)

**687. SUBSTANCE ABUSE AND ADDICTION.** Survey and analysis of social, cultural, medical, and psychological factors underlying alcoholism, drug abuse and addiction; recent research and practice innovations. Prerequisite: SW 621 with minimum grade of C, SW 622 with minimum grade of C, SW 630 with minimum grade of C, SW 640 with minimum grade of C, SW 650 with minimum grade of C. (3)



## **School of Business Administration**

Ken Cyree, dean

Delvin D. Hawley, senior associate dean

Doug Gurley, executive director, Mississippi Small Business Development Center

253 Holman Hall

<http://www.olemissbusiness.com/>

Overview: The School of Business Administration offers the Bachelor of Business Administration (B.B.A.) in the emphasis areas of banking and finance, economics, management, management information systems, marketing, marketing communications, real estate, and risk management and insurance.

At the graduate level, the school offers both a campus and a professional Master of Business Administration (M.B.A.) and a Doctor of Philosophy (Ph.D.) in the emphasis areas of finance, management, marketing, management information systems, and production operations management.

Accreditation: The undergraduate and graduate programs in the School of Business Administration are accredited by the Association to Advance Collegiate Schools of Business International (AACSB).

### **MASTER OF BUSINESS ADMINISTRATION (MBA)**

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Douglas Vorhies, Ph.D., director of MBA programs

[dvorhies@bus.olemiss.edu](mailto:dvorhies@bus.olemiss.edu)

662-915-5483

Bethany Cooper, director of corporate relations and MBA services

[bcooper@bus.olemiss.edu](mailto:bcooper@bus.olemiss.edu)

662-915-5483

<http://www.olemissbusiness.com/MBA/index.html>

Description: The M.B.A. exposes students to a variety of subjects, including statistics, economics, organizational behavior, business communication, marketing, financial strategy, operations management, and information technology management. The M.B.A. is available as either a campus program or as a professional program. The campus M.B.A. can be taken on either a full-time or part-time basis with all courses offered in the evenings and on the Oxford campus. The professional M.B.A. is designed for working business professionals and involves a variety of online technological delivery modes.

Preliminary Requirements: Admission to both the campus and professional programs is competitive with a limited cohort size. Applicants are evaluated based on their academic qualifications, GMAT score, work experience, and other personal attributes. Minimum requirements for admission in full standing include completion of an undergraduate program in an accredited U.S. college or its international equivalent with an acceptable GPA in the last 60 semester hours of academic course work; a GMAT score that indicates proficiency for graduate-level business study; two acceptable letters of recommendation; and professional experience. Whereas post-bachelor's work experience is not required for admission to the campus M.B.A. program, particular consideration is given to applicants for the part-time, professional M.B.A. program possessing two or more years of professional work experience. A TOEFL score of 600 or higher on the paper-based test (or 100 or better on the Internet-based test) is required for international applicants whose native language is not English. Prior to beginning the M.B.A. program, all students must have completed a

3-credit introduction to accounting course and a 3-credit business finance course. These admission requirements are subject to change without notice, and satisfaction of the criteria does not guarantee admission.

Additional Information: All students must have a laptop computer that meets minimum approved specifications.

**The Campus M.B.A. Program:**

For full-time students, the campus program begins in the first summer session with an intensive series of classes that precedes the beginning of the fall semester. In the summer session, students develop essential skills in statistics, managerial economics, and decision-making analysis. Students choosing a 12-month, full-time schedule move through the fall and spring semesters as a cohort. Skills courses in both semesters develop advanced capabilities in finance, accounting, organizational behavior, and marketing analysis. During the spring semester, courses emphasize technology applications, communication, entrepreneurship, global business, and a capstone class emphasizes strategy integration.

Students may also move through the program on a part-time basis. Part-time students may begin the program in any academic semester or summer session. Regardless of entry date and pace, all students take the same courses in the program.

**The Professional M.B.A. Program:**

The professional M.B.A. program is designed to meet the needs of working adults interested in completing a graduate business degree. As opposed to the campus M.B.A. program, the professional M.B.A. employs alternatively delivered methodologies such as Internet learning systems, telephone conference calls, videoconferencing, interactive CD-ROM/DVD technology, and short in-person gatherings. The program may be completed over a two-year period if a student chooses to take two courses each semester: fall semester, spring semester, and summer session. Alternatively, a student may choose to enroll in courses at a rate of one class a semester and, thereby, complete the program in four years. Students may begin the professional M.B.A. in the spring semester, summer session, or fall semester.

Course Requirements: Students must complete the requirements for either the campus or professional M.B.A. program.

**Campus M.B.A.**

Description: The campus M.B.A. can be completed in 12 months on a full-time basis or on a part-time basis, at the student's discretion. All courses are offered in evenings on the Oxford campus.

Course Requirements: The campus M.B.A. requires successful completion of the following 36-hour set of core courses:

Summer

MBA 621-Statistical Analysis  
MBA 614-Business Environment  
MBA 601-Managerial Leadership and Communication

Fall

MBA 617-Managerial Accounting  
MBA 606-Organizational Behavior  
MBA 611-Financial Analysis  
MBA 623-Integrative Business Analysis

Winter Intersession  
MBA 603-Speaker's Edge

Spring  
MBA 612-Business Decision Making  
MBA 613-Mobilizing Technology in the Modern Business  
MBA 622-Business Planning and Entrepreneurship  
MBA 631-Strategic Management: Competitiveness and Globalization

### **Professional M.B.A.**

Description: The professional M.B.A. is designed for working business professionals and involves a variety of technological delivery modes.

Course Requirements: The professional M.B.A. program requires the following 36 hours of courses:

MBA 621-Statistical Analysis  
MBA 614-Business Environment  
MBA 612-Business Decision Making  
MBA 601-Managerial Communications  
MBA 606-Organizational Behavior  
MBA 611-Financial Analysis  
MBA 623-Integrative Business Analysis  
MBA 613-Mobilizing Technology in the Modern Business  
MBA 622-Business Planning and Entrepreneurship  
MBA 624-Project Analysis  
MBA 631-Strategic Management: Competitiveness and Globalization  
MBA 617-Managerial Accounting

### **Master of Business Administration-MBA**

**601. MANAGERIAL LEADERSHIP AND COMMUNICATION.** Integration of leadership theory and practice using active learning with an emphasis on managerial communication, team building, and leadership skills. Laptop is required. (3)

**602. SEMINAR SERIES.** The purpose of the seminar is to complement MBA courses by providing an applied forum for presentation of diverse topics. Student will write preparation or reaction papers and present implications of current events related to the semester's course work emphasis. Laptop is required. Can be repeated up to three times. (1-2)

**603. SPEAKER'S EDGE.** This course explores current theory and practice of effective communication in a competitive business environment. It uses active learning to enhance the classroom experience. (3)

**606. ORGANIZATIONAL BEHAVIOR.** The behavior of people in groups and organizations, concepts and theories for leadership, human resource management, as well as the development of student abilities in writing, speaking, and achieving logical, ethical, and behaviorally successful communication in organizational contexts. Laptop is required. (3)

**611. FINANCIAL ANALYSIS.** Managerial and cost accounting fundamentals as well as the use of current techniques for financial analysis, capital allocation, and capital structure. Laptop is required. (3)

**612. BUSINESS DECISION MAKING.** Decision making methodologies with emphasis on problems facing the firm in a changing global marketplace. Includes multivariate and time series analysis and financial forecasting as tools for the entrepreneur/manager to apply when confronted with strategy implementation decisions. Laptop is required. (3)

**613. MOBILIZING TECHNOLOGY IN MODERN BUSINESS.** The role of information and computer technology in the modern business enterprise. Emphasizes practical application of computer and

information technology to real-world problems and decision environments. Requires development of an advanced end-use application involving process re-engineering. Laptop is required. (3)

**614. BUSINESS ENVIRONMENT.** Economic principles applicable to the solution of selected problems facing business decision makers; emphasizing demand theory, production theory, cost estimation, pricing, and capital budgeting. Laptop is required. (3)

**615. GLOBAL BUSINESS.** The foundation theories of global business and how to effectively analyze the globalization of business. Topics covered include organization structure, strategy development, human resource management, and corporate citizenship of global organizations. Laptop required. (3)

**617. MANAGERIAL ACCOUNTING.** This course provides students with an understanding of the uses and limitations of accounting information in economic decision-making in a variety of personal, business, and other organizational contexts. This course will also build skills in problem solving, interpersonal communications and the use of computers. (3)

**621. STATISTICAL ANALYSIS.** A critical examination of the theory and assumptions underlying the major multivariate statistical techniques. Laptop is required. (3)

**622. BUSINESS PLANNING AND ENTREPRENEURSHIP.** Advanced analysis and decision making in a business setting. Includes financial analysis, competitive strategy and pricing, growth simulations, business condition forecasting, and product supply and demand projections. Competitive cases form a focal point for course organization. Laptop is required. (3)

**623. INTEGRATIVE BUSINESS ANALYSIS.** A rigorous overview of business models and issues that change as products or services evolve through a life cycle. Emphasizes the interrelated view of functional areas within organizations as a foundation for the core skills courses. Laptop is required. (3)

**624. MBA PROJECT ANALYSIS.** Implementation of methodologies taught in other MBA courses. Students address an actual business problem in their chosen areas of specialization. A written report and oral presentation will constitute the principal means by which the student is evaluated. Laptop is required. (3)

**631. STRATEGIC MANAGEMENT: COMPETITIVENESS.** Practical application of the knowledge skills acquired in the first-year courses to real business problems and decision environments. Emphasizes cross-functional integration of tasks and responsibilities to develop effective strategies for problem identification and resolution. Laptop is required. Prerequisite: 14 credit hours required in MBA courses. (3)

## **MASTER OF HEALTHCARE ADMINISTRATION**

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Description: The Master of Healthcare Administration program offers an advanced educational opportunity in health care leadership. It is designed to provide graduates an opportunity to assume upper-level managerial and leadership roles within the health care delivery system.

Healthcare administrators are an integral part of health care delivery. They oversee and coordinate services, determine budgetary allocations, approve new programs, and control where and how healthcare dollars are spent within a facility or system.

The Master of Healthcare Administration program offers part-time and full-time enrollment. Online instruction is the primary method of content delivery. Courses are taught during fall, spring, and summer terms. Due to the specialized content of the program and the close working relationship between faculty and students, an on-site orientation will be required. The orientation will be conducted over a weekend at the beginning of the student's first term.

New students are admitted only in the fall term. The program requires six terms for completion for the full-time track or 9 terms for completion for the part-time track.

Course Requirements — Full-time Track

Fall I (9 hours)

MHA 600-Overview of the U.S. Health Care System (3 hours)

MHA 606-Quantitative Methods in Health Care (3 hours)

MBA 611-Finance (3 hours)

Spring I (9 hours)

MHA 612-Organization of Health Care Systems (3 hours)

MHA 618-Management Overview of Disease and Health (3 hours)

MHA 624-Health Policy and Regulatory Environment (3 hours)

Summer I (6 hours)

MBA 614-Environment of Business (3 hours)

MBA 623-Integrative Business Analysis (3 hours)

Fall II (9 hours)

MHA 630-Health Program Evaluation and Performance Improvement (3 hours)

MHA 636-Health Care Law and Ethics (3 hours)

MHA 642-Health Care Finance (3 hours)

Spring II (9 hours)

MBA 606-Organizational Behavior (3 hours)

MHA 648-Human Resources in Health Care (3 hours)

MHA 654-Community and Long-term Care Administration (3 hours)

Summer II (6 hours)

MHA 660-Internship (3 hours)

MHA 699-Integrated Health Care Leadership (3 hours)

Course Requirements — Part-time Track

Fall I (6 hours)

MHA 600-Overview of the U.S. Health Care System (3 hours)

MBA 611-Finance (3 hours)

Spring I (6 hours)

MHA 612-Organization of Health Care Systems (3 hours)

MHA 618-Management Overview of Disease and Health (3 hours)

Summer I (3 hours)

MBA 614-Environment of Business (3 hours)

Fall II (6 hours)

MHA 606-Quantitative Methods in Health Care (3 hours)

MHA 630-Health Program Evaluation and Performance Improvement (3 hours)

Spring II (6 hours)

MHA 624-Health Policy and Regulatory Environment (3 hours)

MBA 606-Organizational Behavior (3 hours)

Summer II (3 hours)  
MHA 623-Integrated Business Analysis (3 hours)

Fall III (6 hours)  
MHA 636-Health Care Law and Ethics (3 hours)  
MHA 642-Health Care Finance (3 hours)

Spring III (6 hours)  
MHA 648-Human Resources in Health Care (3 hours)  
MHA 654-Community and Long-term Care Administration (3 hours)

Summer III (6 hours)  
MHA 660-Internship (3 hours)  
MHA 699-Integrated Health Care Leadership (3 hours)

**Master of Health Care Administration-MHA**

**600. OVERVIEW OF U.S. HEALTH CARE SYSTEM.** A study of the U.S. health care system and its administrative and political framework. Course topics will include demand for health services, political and policy influences on the health care system, and the impact of public input on health care policies. (3)

**606. QUANTITATIVE METHODS IN HEALTH CARE.** An examination of roles of statistical/mathematical/computer techniques in the evaluation of health care decision-making. The process will entail problem identification and development of research questions/hypotheses, research design and methodology, statistical analysis and interpretations. Ethical and compliance considerations specific to health care will be discussed and incorporated into decision-making. (3)

**612. ORGANIZATION OF HEALTH CARE SYSTEMS.** An examination of U.S. and related world, health care systems from a systems approach. Areas of evaluation include: access, cost, delivery, financing, patient and system-outcomes and regulatory constraints. Additionally, the effects of current and projected changes to the health care delivery will be discussed. Evaluation of health care case studies relating to organization and outcome will be included. (3)

**618. MANAGEMENT OVERVIEW OF DISEASE & HEALTH.** An exploration of epidemiology and current issues in public health and the impact of disease and health on health care administration. (3)

**624. HEALTH POLICY AND REGULATORY ENVIRONMENT.** An examination of the formulation and implementation of health policy in the evolving regulatory environment of the U.S. health care system. (3)

**630. HEALTH CARE PROGRAM EVAL & PERFORMANCE.** An overview of the quality assurance and improvement process including personnel, processes, accountability and systems. Prerequisite: MHA 600, MHA 606, MHA 612, MHA 618, MHA 624. (3)

**636. HEALTH CARE LAW AND ETHICS.** This course presents an overview of the legal issues facing the health care industry. It provides students with a basic working knowledge of health law and ethics. It is a comprehensive and inclusive review of a wide variety of health care legal issues. Students are provided with a realistic knowledge of health law and its application to the real world. (3)

**642. HEALTH CARE FINANCE.** The course will study the fundamentals of healthcare financing from a global administrative perspective through both managerial accounting and finance. Core finance topics such as working capital, resource allocation, financial analysis, third-party reimbursement and provider tax status/implications will be the main foci for this course. Along with basic accounting principles and conventions. (3)

## **PH.D. IN BUSINESS ADMINISTRATION**

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Robert Van Ness, Ph.D., director of doctoral programs  
rvanness@bus.olemiss.edu  
662-915-6940  
<http://www.olemissbusiness.com/AcademicPrograms/Phd/index.html>

Description: The Ph.D. in business administration is offered with an emphasis in finance, management, management information systems (MIS), production/operations management (POM), and marketing. These emphases are designed to enable persons who are seeking careers in institutions of higher learning (or in research or staff positions in business, industry, or government) to acquire a comprehensive, professional education. The doctoral program provides a deep understanding of business administration and in-depth study in the emphasis field.

Preliminary Requirements: Admission to the Ph.D. program is highly competitive with a limited number of positions available each year. Applications will be ranked by the Admissions Committee, and admission will be awarded to the applicants of the highest rank until all positions are filled.

At the minimum, admission in full standing requires the following: (1) an overall undergraduate GPA of 3.0 or above or a 3.10 GPA on the last 60 credit hours attempted at either the undergraduate and/or graduate level; (2) a minimum score of 550 on the GMAT test or a combined score of 1100 on the quantitative and verbal portions of the GRE, as well as 4.0 on the analytical portion; (3) two letters of recommendation from academic or professional sources; (4) a 600 (paper-based) or 100 (Internet-based) TOEFL score (international applicants only); (5) curriculum vitae (résumé) and a brief statement of purpose.

The School of Business Administration is currently admitting students for fall semesters only. Preference will be given to applicants with business work experience. Unofficial copies of the GMAT/GRE test may be submitted at the time of application. However, official copies of these scores must be received by the application deadline.

These admission requirements are subject to change without notice. In rare instances, deficiency in one of these requirements can be offset by superior performance in other areas. Satisfaction of the above criteria does not guarantee admission.

### **Additional Information**

Curriculum: Each student will be required to complete a varying number of graduate credit hours, beyond the bachelor's degree, at the 600 level. The number of graduate credit hours will be determined by the student's program of study, but the overall course work will be determined by prior undergraduate and/or graduate courses in relationship to their program of study. Moreover, each student must complete at least 12 hours in a major field beyond the master's degree and at least 9 credit hours in an approved minor field(s). A doctoral student must also demonstrate proficiency in research methodology and satisfy the tools requirement of the major field department.

Advisement: Upon admission to the School of Business Administration, the student will be assigned an academic adviser, who, with the departmental chair, will structure the student's program of study. A student should be prepared to declare the course work requirements needed to complete their major and minor fields by the end of the first year of study.

Course Requirements: Students in the Ph.D. program in business administration must satisfy the course requirements for an emphasis in finance, management, management information systems (MIS), production/operations management (POM), or marketing.

#### Other Academic Requirements

Written comprehensive examination: All doctoral students in the School of Business Administration are required to pass a written comprehensive examination in their major field of study. A student's major field exam may be taken only upon satisfactory completion of all course work in this field, as well as the tools requirements. Depending on departmental policies, a student may be required to pass a written comprehensive exam in at least one minor field.

Dissertation and Oral Defense: The dissertation, which is supervised and evaluated by the faculty, demonstrates the student's ability to conduct research and to make a distinct and significant contribution to the common body of knowledge within one's discipline. The initial step of the process is directed toward the formulation of a written proposal that must be approved by a dissertation committee. After writing the dissertation, the candidate must successfully defend it before the dissertation committee.

#### **Ph.D., Emphasis in Finance**

Course Requirements: Doctoral students in the Ph.D. program with emphasis in finance are required to complete at least 60 hours of approved graduate credit beyond the bachelor's degree or at least 30 hours of approved courses numbered above 600 beyond the master's degree. The number of graduate credit hours will be determined by the student's program of study and prior undergraduate and/or graduate courses. Moreover, each student must complete at least 12 hours in a major field beyond the master's degree and at least 9 credit hours in approved supplemental courses. A student can choose to pursue a minor by taking at least 9 credit hours in an approved minor field (the supplemental credit hours can be counted towards an approved minor area). In addition to the major and minor fields, each candidate must satisfy such additional requirements as deemed appropriate by the advisory committee. A doctoral student must also demonstrate proficiency in research methodology and satisfy the tools requirement of the major field department.

Students majoring in finance must successfully complete a written preliminary examination at the end of their first year in the program. The examination consists of a quantitative part that satisfies the School of Business tool requirement and a theory part that covers material taught in background finance courses.

Other Academic Requirements: In addition to a written comprehensive examination, students majoring in finance will also take an oral comprehensive examination after successfully completing all of the written comprehensive examinations. The purpose of the oral examination is to evaluate the student's ability to integrate the content of the major and minor areas of concentration.

#### **Ph.D., Emphasis in Management**

Course Requirements: Doctoral students in the Ph.D. program with emphasis in management are required to complete at least 60 hours of approved graduate credit beyond the bachelor's degree or at least 30 hours of approved courses numbered above 600 beyond the master's degree. The number of graduate credit hours will be determined by the student's program of study and prior undergraduate and/or graduate courses. Moreover, each student must complete at least 12 hours in a major field beyond the master's degree and at least 9 credit hours in approved supplemental courses. A student can choose to pursue a minor by taking at least 9 credit hours in an approved minor field (the supplemental credit hours can be counted towards an approved minor area). In addition to the major and minor fields, each candidate must satisfy such additional requirements as deemed appropriate by the advisory committee. A doctoral student must also demonstrate proficiency in research methodology and satisfy the tools requirement of the major field department.



### **Ph.D., Emphasis in Management Information Systems**

Course Requirements: Doctoral students in the Ph.D. program with emphasis in management information systems are required to complete at least 60 hours of approved graduate credit beyond the bachelor's degree or at least 30 hours of approved courses numbered above 600 beyond the master's degree. The number of graduate credit hours will be determined by the student's program of study and prior undergraduate and/or graduate courses. Moreover, each student must complete at least 12 hours in a major field beyond the master's degree and at least 9 credit hours in approved supplemental courses. A student can choose to pursue a minor by taking at least 9 credit hours in an approved minor field (the supplemental credit hours can be counted towards an approved minor area). In addition, each candidate must satisfy such additional requirements as deemed appropriate by the advisory committee. A doctoral student must also demonstrate proficiency in research methodology and satisfy the tools requirement of the major field department.

### **Ph.D., Emphasis in Marketing**

Course Requirements: Doctoral students in the Ph.D. program with emphasis in marketing are required to complete at least 60 hours of approved graduate credit beyond the bachelor's degree or at least 30 hours of approved courses numbered above 600 beyond the master's degree. The number of graduate credit hours will be determined by the student's program of study and prior undergraduate and/or graduate courses. Moreover, each student must complete at least 12 hours in a major field beyond the master's degree and at least 9 credit hours in approved supplemental courses. A student can choose to pursue a minor by taking at least 9 credit hours in an approved minor field (the supplemental credit hours can be counted towards an approved minor area). In addition to the major and minor fields, each candidate must satisfy such additional requirements as deemed appropriate by the advisory committee. A doctoral student must also demonstrate proficiency in research methodology and satisfy the tools requirement of the major field department.

### **Ph.D., Emphasis in Production-Operations Management**

Course Requirements: Doctoral students in the Ph.D. program with emphasis in production-operations management are required to complete at least 60 hours of approved graduate credit beyond the bachelor's degree or at least 30 hours of approved courses numbered above 600 beyond the master's degree. The number of graduate credit hours will be determined by the student's program of study and prior undergraduate and/or graduate courses. Moreover, each student must complete at least 12 hours in a major field beyond the master's degree and at least 9 credit hours in approved supplemental courses. A student can choose to pursue a minor by taking at least 9 credit hours in an approved minor field (the supplemental credit hours can be counted towards an approved minor area). In addition to the major and minor fields, each candidate must satisfy such additional requirements as deemed appropriate by the advisory committee. A doctoral student must also demonstrate proficiency in research methodology and satisfy the tools requirement of the major field department.

### **Business Studies-Bus**

**500. BUSINESS INTERNSHIP.** Internship open to business students of junior or senior standing or to MBA students. A business field experience of at least 10 weeks of full-time employment is required. MBA students may not use this course to satisfy either a core or elective requirement. (May be repeated once). Z grade. (3)

**604. STATISTICAL METHODS FOR BUSINESS.** A case studies approach to statistical technique and computer applications or nonparametric and multivariate analysis in business. (Same as Econ 604).

Prerequisite: Econ 301 with minimum grade of C. (3)

**612. OPERATIONS RESEARCH.** Quantitative techniques for decision making, Bayesian analysis, Markov process, game theory, inventory control, queuing theory, and mathematical programming. (Same as Econ 612). (3)

- 620. INDIVIDUAL STUDY.** Reading and research in a topic selected from one of the following fields: accounting, economics, finance, management, or marketing. (3)
- 621. INDIVIDUAL STUDY.** Reading and research in a topic selected from one of the following fields: accounting, economics, finance, management or marketing. (3)
- 650. ENTERING THE PROFESSION SEMINAR.** Ongoing seminar on topics germane to the profession, such as the career life cycle of professors, teaching methods and pedagogy, career planning, utilizing computer resources, library research, publishing. Z grade. (1)
- 660. RESEARCH METHODS I.** This is the general introductory course in the methodology/statistics track of the SBA doctoral program. It is required of all students, regardless of their functional major within the business school. The general purpose of this course is to provide a broad introduction to the philosophy of science (the guiding principles behind the research process) and to expose students to some initial modes of research (e.g., qualitative versus quantitative) and more specific techniques and their appropriate use. Prerequisite: Math 261, Math 262, Math 319, Psy 603, Psy 604. (3)
- 661. SEMINAR IN RESEARCH AND EXPERIMENTAL DES.** This course focuses on the study of research methods and experimental design. The primary objective of the course is to prepare students to conduct empirical research. Special emphasis is placed on in-depth understanding of the philosophy of science underlying research methods, principles of theory development, methods for enhancing the internal and external validity of research findings, and techniques for valid and reliable measurement. Some basic statistical concepts will also be covered. (3)
- 662. STATISTICS I: SEM. IN LINEAR REGRESSION.** This course will focus on applied linear statistical methods as used in the social and behavioral sciences. Particular attention is devoted to the successful application of linear models to business research. (3)
- 663. STAT. II: MULTIVARIATE & NONPARAMETRIC.** This course covers basic and advanced techniques using multivariate and nonparametric methods. (3)
- 664. STATISTICS III: ADVANCED STATISTICAL TOP.** The focus of this course is on methods related to structural/casual modeling. (3)
- 667. GLOBAL BUSINESS STRATEGY.** The course is designed to examine the relationship between a business organization and the environment as it evolves into the global marketplace. The functional areas of the business will be analyzed to determine the necessary adaptations to each of these activities to be competitive in foreign markets. (3)
- 668. CUSTOMER RELATIONSHIP MANAGEMENT.** Content covers emerging research in the area of customer relationship management. (3)
- 669. DECISION SUPPORT SYSTEMS.** This course introduces students to the software systems that coordinate data, modeling, algorithms, and user-friendly interfacing to create an environment for automated or interactive decision making. (3)
- 670. SUPPLY CHAIN MANAGEMENT.** This course deals with concepts of supply chain management such as logistics, inventory, warehousing, materials handling, and transportation. It will also apply pricing and game theory to supply chain modeling. (3)

## **FINANCE-FIN**

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Bonnie F. Van Ness, Chair, Holman Hall

<http://www.olemissbusiness.com/finance/>

**531. BUSINESS FINANCE TOPICS.** Theory and advanced principles of finance with emphasis upon the use of modern techniques in making business decisions. May be repeated once for credit with the consent of the chair. Prerequisite: Fin 331 with minimum grade of C, 300 or above ACCY or FIN course or Graduate Standing. (3)

**533. SECURITY ANALYSIS AND PORTFOLIO MGMT.** Impact of economic factors and security markets upon security value; risk and return in efficient portfolios. Corequisite: Fin 338. Prerequisite: Fin 331 with minimum grade of C, Fin 334, 300 or above ACCY or FIN course or Graduate Standing. (3)

**534. MANAGING FINANCIAL INSTITUTIONS.** Loan, investment, and fund raising problems of commercial finance companies and factors, savings and loan associations, mutual savings banks, personal loan companies, and public lending agencies. (3)

**537. BANK MANAGEMENT I.** Principles, problems, practices, procedures, and regulations involved in the commercial, real estate, and installment lending areas of the commercial bank. Lecture and case problems. Offered only during the fall semester. Prerequisite: Fin 338 with minimum grade of C. (3)

**538. BANK MANAGEMENT II.** Principles, problems, practices, and procedures involved in the investment, trust, safekeeping, safe deposit, auditing, operations, marketing, and international areas of the commercial bank. Lecture, case problems, and bank simulation. Offered only during the spring semester. Prerequisite: Fin 537 with minimum grade of C. (3)

**542. CORPORATE RISK MANAGEMENT.** Corporate risks and the methods for handling them. Covers losses caused by natural disasters, legal liability suits, and financial price changes. Risk management methods include self-retention funding, loss prevention, insurance, and hedging contracts. (3)

**555. REAL ESTATE INVESTMENT ANALYSIS.** An application of investment principles and techniques of real estate, concentrating on the determination of the economic feasibility of real estate investments and the effects of financing and income taxes upon investment profitability. Offered only during the fall semester. Prerequisite: Fin 331 with minimum grade of C, Fin 351 with minimum grade of C. (3)

**568. INTERNATIONAL FINANCE.** Introduction to the financial problems of foreign operations. Foreign exchange, transfer of funds, banking services, international financial institutions, and investment decisions with major emphasis upon operational and financial problems of multinationals. Prerequisite requirements for this course may be satisfied by consent of instructor. (Same as Law 543). (3)

**581. FUTURES, OPTIONS, AND SWAPS.** Offers a survey of the market for derivative financial instruments, i.e., the market for futures, options, and swaps. Provides a balanced mix of institutional, theoretical, and applied knowledge about how these instruments are designed, priced, and used in practice. Prerequisite: Fin 334 or Fin 533. (3)

**620. ADVANCED DIRECTED STUDY.** Students work with one or more faculty member(s) to develop in-depth knowledge of the critical theories, research methods, and associated literature pertaining to a specific topical area. Drawing on this knowledge, the student will subsequently utilize the advice, coaching, and supervision of the mentoring faculty instructor(s) to conduct original research projects. A primary course goal is the creation of a manuscript(s) to be submitted for presentation at a scholarly conference and/or publication in a refereed journal. (3)

**622. INTERNATIONAL FINANCE.** An advanced analysis of international currency and financial markets. Their role in arbitrage, hedging, intermediation, diversification, and speculative activities is investigated using asset pricing models. (3)

**626. SEMINAR IN INTERNATIONAL ECON & FINANCE.** A research seminar designed to investigate contemporary theoretical and empirical issues in international economics and finance. (3)

**631. SEMINAR IN BUSINESS FINANCE.** A doctoral seminar on the analysis of selected topics in investment and corporate finance. Prerequisite: Fin 633 with minimum grade of C, Fin 635 with minimum grade of C, Econ 630. (3)

**633. INVESTMENT ANALYSIS.** Security analysis and selected problems in portfolio theory emphasizing recent theoretical and analytical developments. (3)

**634. FINANCIAL MANAGEMENT I.** Concepts in business finance with emphasis on financial analysis, capital allocation, and optimal capital structure. (3)

**635. FINANCIAL MANAGEMENT II.** Analysis of selected topics in financial theory. (3)

**636. FINANCIAL MGMT HEALTH CARE INSTITUTIONS.** Theory and application of financial issues and techniques unique to aspects of health care institutions. (3)

**637. MANAGEMENT OF FINANCIAL INTERMEDIARIES.** Examination of the effects that savings, investing, financing, and asset structure decisions have upon financial institutions. (3)

- 642. APPLIED PROBABILITY MODELING.** Concepts of probability modeling for applications. Fundamentals of statistical experiments, events, probability laws, conditional probability, random variables, expectation and conditional expectation, introduction to and applications of Markov chains, papers from literature. Prerequisite: Math 264, Math 353. (3)
- 644. FINANCIAL ECON: CONTINUOUS-TIME MODELS.** An introduction to continuous-time financial economic modeling under uncertainty. Analytical methods for solving these classes of models are developed. Applications to futures, options, intertemporal asset pricing, term structure theory and general contingent-claim valuation is discussed. (3)
- 650. RESEARCH COLLOQUIUM IN ECON & FINANCE.** Presentation and discussion of current research in economics and finance. May be repeated for credit. Z grade. (1)
- 695. SPECIAL TOPICS IN FINANCE.** This seminar covers a varying range of topics depending on the expertise of the instructor. (3)
- 697. THESIS.** No grade. (1-12)
- 797. DISSERTATION.** No grade. (1-18)

## MANAGEMENT-MGMT

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Robert Robinson, Chair, Holman Hall  
<http://www.olemissbusiness.com/management/>

- 527. ADVANCED HUMAN RESOURCE MANAGEMENT.** The study of personnel management at the advanced level necessary for professional preparation. Course topics will include selection, placement, training, compensation, incentives, performance evaluation, and counseling, with an emphasis on legal and practical problems. Prerequisite: Mgmt 383 with minimum grade of C. (3)
- 578. HISTORY OF MANAGEMENT THOUGHT.** Contrasting philosophy of management, historical development of management theory, and current issues in management practices. Prerequisite: Mgmt 371 with minimum grade of C. (3)
- 581. COLLECTIVE BARGAINING.** An introductory course to the field of collective bargaining in the private and public sectors covering such topics as the history of unionism in America, the organizing process, the negotiating process, and administration of the collective bargaining agreement. Emphasis on pragmatic problems confronted by employers, employees, and unions. (Same as Econ 581). Prerequisite: Mgmt 383 with minimum grade of C. (3)
- 582. EMPLOYEE RELATIONS.** Study of the federal regulation of private and public sector human resource management practices. Emphasis on recruiting, selection, employee discipline, equal opportunity compliance, workplace privacy, mandatory benefits, and fair labor standards. Prerequisite: Mgmt 383 with minimum grade of C. (3)
- 583. LABOR RELATIONS.** An advanced course analyzing the evolution and impact of labor law in the U.S. The growth of unions, the Railway Labor Act, the Norris LaGuardia Act, and Fair Employment Law are emphasized using the case approach. (Same as Econ 583). Prerequisite: Mgmt 383 with minimum grade of C, Senior or above standing required. (3)
- 585. STRATEGIC HUMAN RESOURCE MANAGEMENT.** Formulation and implementation of HR policy at the strategic level of an organization. Emphasis on the impact of organizational strategic policy on human resource acquisition and placement, and environmental factors affecting this process. Also, strategies for maximizing HR productivity are introduced. Prerequisite: Mgmt 383 with minimum grade of C, Mgmt 527 with minimum grade of C, Mgmt 582 with minimum grade of C. (3)
- 587. ORGANIZATION THEORY.** Traditional and contemporary organization theories with emphasis on current research and problem solving. Prerequisite: Mgmt 383 with minimum grade of C, Mgmt 371 with minimum grade of C. (3)
- 595. INTERNATIONAL BUSINESS MANAGEMENT.** Analysis of international management concepts and practices; environmental interactions, social and cultural constraints, organizational structures, and

systems of operation. Prerequisite: Bus 321 with minimum grade of C, Mgmt 371 with minimum grade of C. (3)

**606. ADVANCED ORGANIZATION BEHAVIOR.** Advanced study of human behavior in organizations. Emphasis on research literature, problem identification, problem analysis, and solutions. (3)

**620. ADVANCED DIRECTED STUDY.** Reading and research in management. (3)

**664. ADVANCED MANAGEMENT RESEARCH.** Development of management research skills and knowledge through lecture, discussion, and field research examining the problems of implementing and executing research methodology. (3)

**670. ADVANCED READINGS IN MANAGEMENT.** Students are expected to develop and digest a list of readings covering a topic area within management. Students also must demonstrate oral and written competency with respect to their chosen topic area. (3)

**671. GUIDED RESEARCH IN MANAGEMENT.** Under the direction of a member of the research faculty in management, students learn the craft of publishing empirical research. Students must demonstrate an ability to generate a research question, develop and test hypotheses, and write up the results of an empirical study. Prerequisite: Mgmt 691 with minimum grade of C. (3)

**673. SEMINAR IN HUMAN RESOURCE MANAGEMENT.** An examination of advanced topics and current research affecting human resource management. Research techniques in human resource management will be emphasized. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Mgmt 527 with minimum grade of C. (3)

**675. SEMINAR IN EMPLOYEE RELATIONS.** Advanced study of government regulation of human resource management. Discussion of the impact of regulatory practices on such personnel issues as recruiting, selection, promotion, compensation, assignment, and working conditions; research findings. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Mgmt 527 with minimum grade of C. (3)

**676. SEMINAR IN ORGANIZATIONAL BEHAVIOR.** An examination of the content and methodological issues in organizational behavior. Topics examined within a seminar framework will include group dynamics, leadership, motivation, and communication. Prerequisite requirements for this course may also be satisfied by equivalent course work as approved by the department and admission to doctoral program. Prerequisite: Mgmt 606. (3)

**678. SEMINAR IN GROUP PROCESS.** This seminar provides an in-depth analysis of group processes in organizations; course objectives include mastery of classic and current literature on work groups and an appreciation of emerging group theory and research. (3)

**679. THEORETICAL FOUNDATIONS OF MANAGEMENT.** Provides an in-depth examination of the theoretical foundations underlying the field of management. Special attention is devoted to establishing a historical perspective for understanding and appreciating the continuing development of management theory, research, philosophies, and practices. A literature survey of the emergent management disciplines, including business policy/strategy, human resource management, management information systems, organizational behavior, organizational theory, and production/operations management is provided. (3)

**695. SPECIAL TOPICS IN MANAGEMENT.** This seminar covers a varying range of topics depending on the expertise of the instructor. (3)

**697. THESIS.** No grade. (1-12)

**797. DISSERTATION.** No grade. (1-18)

## **MANAGEMENT INFORMATION SYSTEMS**

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Milam W. Aiken, Chair, 240 Holman Hall  
<http://www.olemissbusiness.com/mispom/>

### **Management Information Systems-MIS**

**609. E-COMMERCE & INTERNET PROGRAMMING.** This course will present the basic concepts of e-commerce and Internet programming. The course will cover many languages and technologies such as JavaScript, VBScript, VB.NET, Java, Perl, PHP, ASP, Active-X, and XML/XSL/CSS that will enable the student to develop and maintain Web pages for an e-business. Prerequisite: Instructor Approval Required. (3)

**619. ADVANCED INFORMATION SYSTEMS MGMT.** Advanced study of file processing, databases and database management systems within organizations, logical models (hierarchical, network, relational, and object-oriented), query, optimization, recovery, integrity, concurrency, security, distributed databases and client-server architecture, database machines, knowledge-based and text-based systems, and data mining and warehousing. Experience in practicing data analysis, design, implementation, and administration. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: MIS 640 with minimum grade of C. (3)

**620. ADVANCED DIRECTED STUDY.** Students work with one or more faculty members to develop in-depth knowledge of the critical theories, research methods, and associated literature pertaining to a specific topical area. Drawing on this knowledge, the student will subsequently utilize the advice, coaching, and supervision of the mentoring faculty instructor(s) to conduct original research projects. A primary course goal is the creation of a manuscript(s) to be submitted for preparation at a scholarly conference and/or publication in a refereed journal. (3)

**640. THEORETICAL FOUNDATIONS OF MIS/POM.** This course provides a general introduction and grounding in the MIS and POM areas and serves as a functional core course. (3)

**665. MANAGEMENT OF INFORMATION SYSTEMS.** The course covers the issues, strategies, and tactics for effective management of an enterprise's information technology resources. The course emphasizes the development of new conceptual/research models related to the impact of information systems within organizations. (3)

**695. SPECIAL TOPICS IN MIS/POM.** This seminar covers a varying range of topics depending on the expertise of the instructor. (3)

#### **Production Operations Management-Mgmt**

**660. PRODUCTION AND OPERATIONS MANAGEMENT.** Managerial tools and techniques in production and operations management. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Econ 604 with minimum grade of C. (3)

**674. ADVANCED OPERATIONS MANAGEMENT.** Applications of management science to problems in operations management. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Mgmt 660 with minimum grade of C. (3)

**677. INTEGER AND NONLINEAR OPTIMIZATION.** Current developments in optimization theory and their application to problems in operations management. Emphasis will be on integer and nonlinear programming applications. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Mgmt 660 with minimum grade of C. (3)

**680. PRODUCTION SCHEDULING.** Current scheduling issues that managers of production planning in the industry are faced with. Traditional solution techniques and current developments are covered. Prerequisite requirements for this course may also be satisfied by equivalent course work as approved by the department, or by consent of instructor. Prerequisite: Math 261 with minimum grade of C, Math 262 with minimum grade of C. (3)

## MARKETING-MKTG

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Scott J. Vitell, Chair, Holman Hall  
<http://www.olemissbusiness.com/marketing>

**451. MARKETING POLICY AND STRATEGY.** A course focusing on the integration and application of marketing knowledge. Marketing strategy and management are explored through the use of rigorous case studies, leading articles from the business press, and a hands-on marketing management computer simulation. Both analytical and creative thinking are emphasized. Prerequisite: Mktg 351 with minimum grade of C. (3)

**465. ADVANCED CAMPAIGN PLANNING.** This course applies integrated marketing communications to a real-world corporate case. Intensive research, target market analysis, strategic communications, media planning, creative design, and campaign evaluation techniques are studied. Creative, analytical, and presentation skills are refined for a career in marketing communications. Prerequisite: Mktg 353 with minimum grade of C, Mktg 351 with minimum grade of C. (3)

**525. MARKETING RESEARCH.** The role of research in marketing decision making, research design and methodology, appraisal of alternative research methods, concepts of dealing with and collecting primary data. Prerequisite: Mktg 351 with minimum grade of C, MIS 309, Bus 230 or Econ 230 or Econ 230 or Bus 302 or Econ 302. (3)

**620. ADVANCED DIRECTED STUDY.** Students work with one or more faculty members to develop in-depth knowledge of the critical theories, research methods, and associated literature pertaining to a specific topical area. Drawing on this knowledge, the student will subsequently utilize the advice, coaching, and supervision of the mentoring faculty instructor(s) to conduct original research projects. A primary course goal is the creation of a manuscript(s) to be submitted for presentation at a scholarly conference and/or publication in a refereed journal. (3)

**650. MARKETING MANAGEMENT.** A comprehensive survey course studying managerial approaches to the making of marketing decisions. Substitution of another 600-level marketing course permitted for student with undergraduate majors/minors in marketing. (3)

**660. APPLIED MULTIVARIATE STATISTICS.** A critical examination of the theory and assumptions underlying the major multivariate statistical techniques of multiple regression, discriminant analysis, canonical correlation, factor analysis, categorical data analysis, and multivariate analysis of variance. Also examined is what the literature says regarding the consequences of violating the assumptions and showing how the major statistical software packages can be used to test crucial assumptions. (3)

**661. RESEARCH SEMINAR: METHODOLOGY I.** The steps in the research process, including problem statement, hypothesis formulation and testing, design and analytical options of special relevance to field. (3)

**664. METHODOLOGY II-MEASUREMENT & SCALING.** The objectives of this course are to introduce the student to the foundations of scientific investigation, the procedures used in scale development, including assessment of validity and reliability, and, in turn, how this set of procedures is used to develop a scale for the measurement of a construct applicable to the student's area of research interest. (3)

**665. CAUSAL MODELING IN MARKETING.** The art of constructing, estimating, and stimulating sets of relations representing processes, behaviors, or causal phenomena of intellectual interest in marketing. (3)

**666. ADVANCED MARKETING RESEARCH METHODS.** The objectives of this course are to review new and emerging research methodologies used in marketing and to allow the student to develop a depth of understanding of these approaches, which will permit the student to effectively use them in one's research and evaluate the research done by others. (3)

**668. ADVANCED MARKETING READINGS I.** A synthesis of the current and "classic" literature in marketing thought, including applications of managerial decision making to problems in marketing. (3)

**669. THEORETICAL FOUNDATIONS OF MARKETING.** A synthesis of the current and “classic” literature in marketing thought, including applications of managerial decision making to problems in marketing. (3)

**670. ADVANCED STUDIES IN CONSUMER BEHAVIOR.** An analysis of the various contributors in the area of consumer research with an emphasis on current and “classic” consumer behavior literature. (3)

**671. PREPARING RESEARCH PROPOSALS.** The goal of this course is to prepare students to begin serious development of their dissertation and to stimulate interest in research and publication. Topics covered include basic research design; review of methods of collecting data in library, field, and laboratory settings; data analysis; research funding; costing; and reporting. (3)

**672. BUYER BEHAVIOR AND E-COMMERCE STRATEGIES** The purpose of this course is to emphasize issues of electronic commerce as they affect buyer behavior and the development of an effective marketing strategy. Particular emphasis will be placed on research and measurement of emerging issues in the field. (3)

**697. THESIS.** No grade. (1-12)

**797. DISSERTATION.** No grade. (1-18)

### **Systems Management-Msm**

**610. COMPUTER PRODUCTIVITY.** An integrated object development approach to software productivity tools, hardware, operating systems, and information creation and acquisition through the Internet. Online multimedia modules are used. (2)

**611. OPERATIONS MANAGEMENT.** A general overview of how creations of goods and services fits into the overall actions of an organization. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Msm 610 with minimum grade of C. (1)

**612. MARKET/PRODUCT MANAGEMENT.** Application of analytical and process management skills in solving complex marketing problems. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Msm 611 with minimum grade of C. (1)

**613. FINANCIAL DECISION MAKING.** An integration of financial statement analysis, present-value concepts, capital budgeting techniques, and related topics for business decision making. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Msm 612 with minimum grade of C. (1)

**614. HUMAN RESOURCE MANAGEMENT.** An overview of human resource management concepts, practices, and issues, with specific emphasis on legal issues, staffing performance appraisal, training, compensation, and labor relations. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Msm 613 with minimum grade of C. (1)

**620. MANAGERIAL COMMUNICATIONS.** Oral and written characteristics in a managerial environment, including the functional and psychological aspects of business communication. Written messages will include e-mail, memorandum, letters, reports, and proposals. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Msm 614 with minimum grade of C. (2)

**621. MANAGEMENT INFORMATION SYSTEMS.** An in-depth exploration of the development and management of information technology in an organization. This course will focus on integrated computer-based information systems. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Msm 620 with minimum grade of C. (2)

**622. TELECOMMUNICATIONS.** Managerial implications of telecommunications functions components and regulatory issues. Topics include computer networks, LAN's, WAN's, VAN's, interorganizational systems, and other emerging topics. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Msm 620 with minimum grade of C. (1)

**623. BEHAVIORAL SKILLS FOR MANAGERS.** This course combines intrapersonal skills and interpersonal skills. An overview of human behavior in organizations with emphasis on personality, perceptions, values, attribution, creative thinking, learning, conflict, negotiation, stress, and culture and



diversity. Prerequisite requirements for this course may also be satisfied by consent of instructor.

Prerequisite: Msm 622 with minimum grade of C. (2)

**624. LEADERSHIP.** An analysis of leadership styles, followership and power and the impact of strategic change on leadership. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Msm 623 with minimum grade of C. (1)

**625. TEAM BUILDING.** A presentation of the knowledge, skills, and tools managers need to overcome the problems associated with developing work groups into effective teams. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Msm 624 with minimum grade of C. (1)

**626. LEGAL ENVIRONMENT.** An overview of the legal issues affecting management with emphasis on employment law and workplace safety. The manager, and their interaction with government regulation and the legal system will be emphasized. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Msm 625 with minimum grade of C. (1)

**627. DECISION MAKING FOR TECHNOLOGY.** An introduction and development of the statistical and modeling techniques needed to institute and manage the overall resource allocation function in an organization. Software will be used to apply quantitative techniques to management problems. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Msm 626 with minimum grade of C. (1)

**628. FINANCING FOR TECHNOLOGY.** This course is an overview of the following topics: agency theory, advanced capital budgeting, transfer pricing, make/buy decisions, lease/purchasing decisions. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Msm 627 with minimum grade of C. (0)

**629. QUALITY MANAGEMENT.** An overview of quality programs in manufacturing and service industries. Emphasis on product or service and process design with continuous improvement. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Msm 628 with minimum grade of C. (2)

**630. DIRECTED INDIVIDUAL STUDY IN SPECIALTY.** At the end of the M.S. in Systems Management (M.S.S.M.) program, each student is required to conceive, design, and execute a comprehensive application-oriented systems management project focused on a specific industry or company. Up to 6 hours may be used in Msm 630 as directed individual study to develop specific skills required for the project or to complement the project. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Msm 629 with minimum grade of C. (3-6)

**640. INDIVIDUALIZED APPLICATION PROJECT.** At the end of the M.S. in Systems Management (M.S.S.M.) program, each student is required to conceive, design, and execute a comprehensive application-oriented systems management project focused on a specific industry or company. Projects will be developed by the student under the guidance of the lead faculty member of the project committee. The committee will have some flexibility in the determination of the work required for the 12-hour credit. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Msm 629 with minimum grade of C. (6-9)

## School of Education

David Rock, dean

222 Guyton Hall

662-915-7063

[http://www.olemiss.edu/depts/educ\\_school2/](http://www.olemiss.edu/depts/educ_school2/)

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### CURRICULUM AND INSTRUCTION

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Associate Professor Susan McClelland, interim chair • 316 Guyton Hall

Overview: The Department of Curriculum and Instruction offers the Master of Education (M.Ed.) and Educational Specialist (Ed.S.), with emphases in elementary education, secondary education, and special education; the M.Ed. in literacy education; the Master of Arts (M.A.) (Teacher Corps option); the Doctor of Education (Ed.D.) in elementary education; and the Doctor of Philosophy (Ph.D.) in secondary education.

Accreditation: The Department of Curriculum and Instruction is accredited by the Mississippi Department of Education, National Council for Accreditation of Teacher Education, and the Southern Association of Schools and Colleges.

Goals/Mission Statement: The philosophy of the Department of Curriculum and Instruction, as it applies to the preparation of teachers, is reflected by the belief that teachers should be prepared to

- Develop and engage in appropriate teaching strategies by studying, interacting, practicing, and reflecting;
- Collaborate in identifying and meeting the broad range of goals for which schools are responsible in today's society;
- Show by modeling and encouraging students the dispositions of leading, thinking, problem solving, and lifelong learning;
- Respect and serve culturally diverse populations and communities; and
- Assume responsibility for the quality and effectiveness of their professional lives.

#### M.Ed. in Curriculum and Instruction

Description: The M.Ed. in curriculum and instruction is offered with three emphasis areas: elementary education, special education, and secondary education. The latter emphasis can also be completed with one of four specializations: English education, mathematics education, science education (biology, physics, and chemistry), and social studies education. For each program, candidates engage in readings, research, discussions, simulations, reflections, applications, and field experiences/clinical practices intended to help them grow as reflective education professionals.

#### Preliminary Requirements

Entrance to all M.Ed. programs requires the following:

1. Verification of National Board Certification or an official copy of passing Praxis II scores on either the Principles of Learning and Teaching (PLT) (minimum score 156) or the required subject area exam according to department requirements. Contact the department for test codes and minimum scores. GRE scores are required for spring 2009 applicants. Praxis II scores and National Board Certification will not be accepted after fall 2008.
2. A copy of the Class A (standard five-year) license or proof of eligibility to hold a standard teaching license.

3. Minimum GPA of 3.0 on all previous course work.

4. Two disposition assessment forms completed as indicated on form. Contact the department for copies of these forms.

Note: A decision regarding admission will not be made until all required paperwork is on file at the Department of Curriculum and Instruction office.

Additional Information: Candidates who are conditionally admitted or who elect to enroll as nondegree-seeking students may take only 9 hours and are NOT eligible for financial aid.

Course Requirements: The M.Ed. degree requires 30 semester hours of course work with emphasis in elementary, secondary, or special education. All candidates for the degree must take Educational Research I (Edrs 605) and Advanced Curriculum Theory and Practice (Edci 601).

#### **M.Ed. with an Emphasis in Elementary Education**

Description: The M.Ed. with an emphasis in elementary education enables a student to specialize in language arts/reading or science/mathematics. The M.Ed. program addresses national board standards with special emphasis placed on lifelong learning, research findings, and innovative curricula.

Course Requirements: The M.Ed. in curriculum and instruction with emphasis in elementary education requires the following: professional core courses (9 hours, Edrs 605, Edci 601, Edci 503); specialization area courses (15 hours from either language arts/reading or math/science); and 6 hours of electives (electives must be approved by the adviser). Total hours in the master's program are 30.

Other Academic Requirements: M.Ed. candidates must successfully complete a professional portfolio and have a minimum of 45 hours of adviser-approved field experiences. M.Ed. candidates must also pass a comprehensive exam at the end of their program.

#### **M.Ed. with an Emphasis in Secondary Education**

Description: The M.Ed. with an emphasis in secondary education can be completed with a specialization in English education, mathematics education, science education, or social studies education. The program addresses national board standards with special emphasis placed on lifelong learning, research findings, and innovative curricula.

Course Requirements: The M.Ed. in curriculum and instruction with emphasis in secondary education requires students to complete a set of professional core courses (9 hours, Edrs 605, Edci 601, Edci 503) and to complete one of two options. Option I candidates are required to take 15 hours based on their specialization area (English, mathematics, science, or social studies) and two (6 hours) electives. Option II requires candidates to be full-time students at the Oxford campus and to take 21 hours of content courses from the specialization area. All courses must be approved by the candidate's adviser. Total hours in the master's program are 30.

Other Academic Requirements: M.Ed. candidates must successfully complete a professional portfolio and have a minimum of 45 hours of approved field experiences. M.Ed. candidates must also pass a comprehensive exam at the end of their program.

### **M.Ed. with an Emphasis in Special Education**

Description: The M.Ed. with an emphasis in special education addresses national board standards with special emphasis placed on lifelong learning, research findings, and innovative curricula.

Course Requirements: The M.Ed. in curriculum and instruction with emphasis in special education requires the following: professional core courses (9 hours, Edrs 605, Edci 601, Edci 503); major area courses (15 hours to include Edsp 628, Edsp 683, Edsp 552, and two additional courses in special education); and 6 hours of electives (electives must be approved by the adviser). Total hours in the master's program are 30.

Other Academic Requirements: M.Ed. candidates must complete a professional portfolio and have a minimum of 45 hours of approved field experiences. M.Ed. candidates must also pass a comprehensive exam at the end of their program.

### **M.Ed. in Literacy Education**

Description: The M.Ed. in literacy education is designed to meet the needs of in-service teachers in two ways: 1) to become literacy coaches/literacy leaders in K-12 schools, and 2) to become more specialized as literacy teachers in K-12 classrooms.

Preliminary Requirements: Admission to the M.Ed. in literacy education is competitive, with admission's openings limited in number and dependent upon the availability of faculty mentors. Candidates admitted to the program will be assigned a faculty mentor upon admittance.

The admission requirements for the program are as follows:

- 3.0 GPA on the last 60 hours of undergraduate work
- Competitive GRE scores
- Statement on philosophy of education (including an assignment and rubric for grading)
- Two letters of recommendation
- Hold or be eligible to hold an educator's license

Applications must be received before March 15 for the first summer term admission. Candidates are admitted only during the spring semester with course work beginning the first summer term.

Course Requirements: The M.Ed. in literacy education requires 36 hours of course work. All candidates for the degree are required to take the following courses:

Core Courses—9 hours

Edrs 605-Educational Research  
Edci 601-Advanced Curriculum and Theory  
Edci 503-Measurement and Evaluation

Literacy Education Courses—27 hours

Edlt 601-Literacy Foundations: Theory, History, and Research  
Edlt 602-Early Literacy Development  
Edlt 603-Expanding Literacy Development  
Edlt 604-Effective Literacy Assessment and Intervention  
Edlt 605-Content Area Literacy  
Edlt 606-Literature for Children and Adolescents  
Edlt 607-Literacy Leadership  
Edlt 608-Literacy Internship I  
Edlt 609-Literacy Internship II

Additional Requirements: Candidates must maintain a “B” average on all course work in the program and must meet with the faculty adviser prior to registration each semester. At the end of the program, candidates must successfully complete a written comprehensive examination and a portfolio evaluation.

### **Ed.S. in Curriculum and Instruction**

Overview: The Department of Curriculum and Instruction offers the Master of Education (M.Ed.) and Educational Specialist (Ed.S.), with emphases in elementary education, secondary education, special education, and literacy education; the Master of Arts (M.A.) (Teacher Corps option); the Doctor of Education (Ed.D.) in elementary education; and the Doctor of Philosophy (Ph.D.) in secondary education.

Accreditation: The Department of Curriculum and Instruction is accredited by the Mississippi Department of Education, National Council for Accreditation of Teacher Education, and the Southern Association of Schools and Colleges.

#### **Preliminary Requirements**

Entrance to all specialist programs requires the following:

1. Verification of National Board Certification or an official copy of passing Praxis II scores on either the Principles of Learning and Teaching (PLT) (minimum score 164) or the required subject area exam according to department requirements. Contact the department for test codes and minimum scores. GRE scores are required for spring 2009 applicants. Praxis II scores and National Board Certification will not be accepted after fall 2008.
2. A copy of the Class AA license.
3. Minimum GPA of 3.25 on all previous graduate work.
4. Two disposition assessment forms completed as indicated on form. Contact the department for copies of these forms.
5. Evidence of two years' teaching experience or relevant work experience (letter from employer).
6. Complete an acceptable writing sample under conditions set forth by the faculty of the Department of Curriculum and Instruction.

Note: A decision regarding admission will not be made until all required paperwork is on file at the Department of Curriculum and Instruction office.

Additional Information: Candidates who are conditionally admitted or who elect to enroll as nondegree-seeking students may take only 9 hours and are NOT eligible for financial aid.

Description: The Ed.S. degree provides students with educational development beyond the master's level. Graduates may pursue this degree to obtain additional credentials or as a step while deciding whether to work for a doctoral degree. Specialist's degree candidates address national board standards with special emphasis on lifelong learning and development of leadership skills.

Goals/Mission Statement: The philosophy of the Department of Curriculum and Instruction, as it applies to the preparation of teachers, is reflected by the belief that teachers should be prepared to:

- Develop and engage in appropriate teaching strategies by studying, interacting, practicing, and reflecting;
- Collaborate in identifying and meeting the broad range of goals for which schools are responsible in today's society;

- Show by modeling and encouraging students the dispositions of leading, thinking, problem solving, and lifelong learning;
- Respect and serve culturally diverse populations and communities; and
- Assume responsibility for the quality and effectiveness of their professional lives.

Course Requirements: The Ed.S. degree requires 36 semester hours of course work beyond the master's level. Students must complete an emphasis in either elementary, secondary, or special education. The requirements include a set of foundation courses, a set of specialization requirements (in either elementary, secondary, or special education), and a selection of emphasis area and elective courses.

Other Academic Requirements: Specialist's candidates must complete a minimum of 65 hours of approved field experiences and submit a scholarly paper to a refereed journal.

#### **Ed.S. with Emphasis in Elementary Education**

Course Requirements: The Ed.S. with emphasis in elementary education requires the following: foundation course requirements (18 hours), Edci 601, Edrs 605, Edci 658, Edrs 501, Edci 557, Educ 555; specialization courses (12 hours), including Edci 635, Edel 601, Edel 767, with the remaining 9 hours being electives (3 from the emphasis area and 6 general electives), which must be approved by the candidate's adviser. Total hours in the Ed.S. with emphasis in elementary education are 30.

#### **Ed.S. with Emphasis in Secondary Education**

Course Requirements: The Ed.S. with emphasis in secondary education requires the following: foundation courses (15 hours), including Edrs 501, Edci 557, and Edci 658, and with the remaining 6 hours of foundation courses being electives that must be approved by the candidate's adviser; specialization courses (9 hours), including Edse 690, Edse 767, and Edse 625; the remaining 12 hours (6 from the emphasis area and 6 general electives) are electives that must be approved by the candidate's adviser. Total hours in the Ed.S. with emphasis in secondary education are 36.

#### **Ed.S. with Emphasis in Special Education**

Course Requirements: Requirements for the Ed.S. with emphasis in special education include foundation requirements (18 hours), Edci 601, Edrs 605, Edci 658, Edrs 501, Edci 557, Educ 555; specialization requirements (12 hours), Edsp 674 and Edsp 651, with the remaining 12 hours (6 from the emphasis area and 6 general electives) being electives that must be approved by the candidate's adviser. Total hours in the special education Ed.S. program are 30.

#### **Ed.D. in Elementary Education**

Description: The Ed.D. degree in elementary education prepares graduates to assume positions such as teacher educators, curriculum directors, state department of education personnel, or leaders in other educational settings. Doctoral-level students generate and utilize research, apply research and theory in curriculum development, and communicate ideas through writing and speaking with other professionals in the field.

#### **Preliminary Requirements**

Entrance requirements for the Ed.D. program are as follows:

1. Verification of National Board Certification OR an OFFICIAL COPY of passing Praxis II scores on either the Principles of Learning and Teaching (PLT) (minimum score 164) OR the required subject area exam according to department requirements. Contact the department for test codes and minimum scores. GRE scores are required for spring 2009 applicants. Praxis II scores and National Board Certification will not be accepted after fall 2008.

2. Minimum GPA of 3.5 on all previous graduate work.
3. Two disposition assessment forms completed as indicated on form. Contact the department for copies of these forms.
4. Evidence of two years' teaching experience or relevant work experience (letter from employer). Exceptions must be submitted to the graduate coordinator for graduate committee consideration.
5. Complete a two-hour written preliminary exam on an assigned topic set forth by the faculty of the Department of Curriculum and Instruction.
6. Complete an oral interview with Department of Curriculum and Instruction graduate faculty.

Note: A decision regarding admission will not be made until all required paperwork is on file at the Department of Curriculum and Instruction office.

Additional Information: Candidates who are conditionally admitted or who elect to enroll as nondegree-seeking students may take only 9 hours and are NOT eligible for financial aid.

Course Requirements: The Ed.D. degree requires a minimum of 81 hours of course work, plus 18 hours of dissertation, for a total of 99 hours beyond the bachelor's degree. Requirements include the professional core, including Edrs 501-Educational Statistics I, Edrs 605-Educational Research I, Edrs 701-Educational Statistics II, Edrs 704-Foundations of Qualitative Research Methodology, Edrs 705-Educational Research II, and Edfd 609-The Cultural Context of Education. Additionally, candidates must take Edci 503-Measurement and Evaluation for the Classroom Teacher and Edci 601-Advanced Curriculum Theory and Practice. All electives should be approved by the candidate's adviser.

Other Academic Requirements: Doctoral candidates must complete a written comprehensive exam, present a professional portfolio and a complete dissertation, in addition to completing 75 hours of approved field experiences.

### **Ph.D. in Education**

Preliminary Requirements: Different entrance requirements exist for the emphasis in secondary education and the emphasis in educational leadership (to be found under Leadership and Counselor Education):

#### Secondary Education

1. Verification of National Board Certification OR an OFFICIAL COPY of passing Praxis II scores on either the Principles of Learning and Teaching (PLT) (minimum score 164) OR the required subject area exam according to department requirements. Contact the department for test codes and minimum scores.
2. Minimum GPA of 3.5 on all previous graduate work.
3. Two recommendation forms completed as indicated on form. Contact the department for copies of these forms.
4. Evidence of two years' teaching experience or relevant work experience (letter from employer). Exceptions must be submitted to the graduate coordinator for graduate committee consideration.
5. Complete a two-hour written preliminary exam on an assigned topic set forth by the faculty of the Department of Curriculum and Instruction.
6. Complete an oral interview with curriculum and instruction graduate faculty.

Note: A decision regarding admission will not be made until all required paperwork is on file at the Department of Curriculum and Instruction office.

### **Ph.D. in Education with Emphasis in Secondary Education**

Description: The Ph.D. in education with emphasis in secondary education can be completed with specializations in English, mathematics, science, and social studies education. Candidates in the program address national board standards, conduct research and further their development of leadership skills. Graduates may assume positions as university faculty and leaders in other educational settings. Doctoral-level graduates generate and utilize research, apply research and theory in curriculum development, and communicate ideas through writing and speaking with other professionals in the field.

Course Requirements: The Ph.D. with an emphasis in secondary education requires 99 semester hours beyond the bachelor's degree, including 18 dissertation hours. The 99 hours include 18 hours of professional core courses, 33 hours of specialization to include 24 hours in a content field, and 18 hours of courses in a related field. The professional core includes Edrs 501-Educational Statistics I, Edrs 701-Educational Statistics II, Edrs 605-Educational Research I, Edrs 704-Foundations of Qualitative Research Methods, Edrs 705-Educational Research II, and Edrd 609-The Cultural Context of Education. All electives should be approved by the candidate's adviser.

Other Academic Requirements: Doctoral candidates must complete a written comprehensive exam, present a professional portfolio and a complete dissertation, in addition to completing 75 hours of approved field experiences.

### **M.A. in Curriculum and Instruction**

Description: The M.A. in curriculum and instruction is offered for students who participate in the Mississippi Teacher Corps program or for students who have earned a bachelor's degree and who are seeking licensure in secondary education. Teacher Corps is a two-year program, similar to the Peace Corps, that recruits college graduates to teach in the Mississippi Delta. The program is designed for noneducation majors and offers a host of benefits, including:

- Teacher training and certification;
  - Full scholarship for a master's degree in education;
  - Job placement that includes full pay (\$30,000+) and benefits;
  - The opportunity to make a difference in the lives of students in one of the poorest areas of the country.
- The non-Teacher Corps option can be completed in one year and prepares graduates to teach secondary math, science, social studies, or English.

Course Requirements: See your department chair or advisor for major specific requirements.

### **M.A. in Curriculum and Instruction, Emphasis in Early Childhood Education**

A Master of Arts in curriculum and instruction with an emphasis in early childhood education (a nonteaching certification degree).

Purpose: The M.A. program with emphasis in early childhood education is designed to meet the needs of applicants who aspire to hold a leadership role in early childhood education and desire a graduate degree. No teacher certification can be obtained with this degree. This degree will not be recognized by the Mississippi State Department of Education or other state departments for teacher certification purposes. The applicants for the Master of Arts degree must complete 30 graduate hours.



Admission Policies and Procedures: Applicants applying to the Master of Arts program in the Department of Curriculum and Instruction should follow the admission policies and procedures outlined in this document.

Applicants must meet all admission requirements of the Graduate School and the School of Education.

Admission Requirements:

1. A complete graduate application for admission must be submitted to the Graduate School.
2. One official transcript from each college/university attended.
3. A \$25 application fee (Mississippi residents exempt).
4. Official test scores from the Graduate Record Examination (GRE)—(verbal and quantitative scores).
5. The applicants must sign a document verifying their knowledge related to this nonteaching certification degree.

Program:

I. Professional Core (9 hours)

Edrs 605 Educational Research

Edec 500 Introduction to Early Childhood Education

Edel 519 Techniques and Principles for Classroom Management

II. Emphasis Area (15 hours)

Edel 601 Child Growth and Development

Edec 551 Science and Number Concepts in Early Childhood Education

Edec 553 Language Conceptual Literature in Early Childhood Education

Edec 555 Art and Music in Early Childhood Education

Edec 557 Seminar: Social Living in Early Childhood Education

Edec 570 Program Development and Administration in Early Childhood Education

Edec 667 Early Childhood Education Seminar

Edls 519 Selection of Media for Children

III. Electives (6 hours)

Electives may be graduate courses with an Edec, Edel, Edsp, or Edrd prefix and/or any other graduate course inside or outside the School of Education.

English as a Second Language (ESL)

Certification • The Department of Curriculum and Instruction, TESOL Program, proposes the following 12-hour course program to meet the competencies in (1) language principles; (2) language acquisition; (3) methodology; (4) cross-cultural awareness; and (5) assessment for an add-on endorsement to current Mississippi teaching certification: Engl 501, Edci 631, Edci 542, and Edci 647.

**M.A. in Curriculum and Instruction, Emphasis in Secondary Education**

Course Requirements: The subject area teaching emphasis is available for alternate certification for arts and sciences majors participating in the Mississippi Teacher Corps Program. In order to receive full admission to the degree program, applicants must present evidence of having met the required score established by the Mississippi State Department of Education on the Praxis I and Praxis II (Subject Area Exam) in the content area of biology, chemistry, English, French, mathematics, physics, social studies, or Spanish. The emphasis in subject area teaching requires 30 hours of graduate course work to include

INITIAL SUMMER COMPONENT (9 hours)

Edse 500 Foundations of Secondary Education

Edse 501 Classroom Practices  
Edse 502 Multicultural Field Experiences

**FALL SEMESTER (6 hours)**

Edse 600 Effective Teaching and Community Service  
\*Students take one of the advanced methods courses that correspond to their certification area.  
Edse 642 Advanced Methods of Teaching English  
Edci 643 Advanced Methods of Teaching Foreign Languages  
Edse 645 Advanced Methods of Teaching Mathematics  
Edse 646 Advanced Methods of Teaching Science  
Edse 647 Advanced Methods of Teaching Social Studies

**SPRING SEMESTER (6 hours)**

Edci 557 Computer Concepts and Applications for Educators  
Edse 610 Innovations in Education

**SUMMER SESSION (6 hours)**

Edrs 605 Educational Research I  
Edld 641 The Legal Context of Education

**FALL SEMESTER (3 hours)**

Edld 501 The Effective Principal

In addition, the student must successfully defend a program portfolio.

For additional information about the program, contact the director of the Mississippi Teacher Corps.

**Educational Media-Edav**

**573. ORG. & DIRECT. OF INSTRUCT. MEDIA CENTER.** Problems in directing the media center. Evaluation of needs for media programs; their organization in colleges, schools, and school systems. (3)  
**651. ADVANCED INDIVIDUAL STUDY.** Development of special projects under supervision. (1-6)  
**652. ADVANCED INDIVIDUAL STUDY.** Development of special projects under supervision. (1-6)  
**676. THE USE OF GRAPHIC MATERIALS IN TEACHING.** Proper construction and utilization of charts, graphs, maps, globes, and other graphic material. (3)  
**697. THESIS.** No grade. (1-12)  
**767. FIELD STUDY.** Report involving original study of a problem in the candidate's field of specialization. Z grade. (3)  
**797. DISSERTATION.** No grade. (1-18)

**Curriculum and Instruction-Edci**

**500. ASSESSING STUDENT LEARNING.** Differential instruction and assessment; state and national assessments. Course can only be taken for graduate credit. (3)  
**501. EFFECTIVE TEACHING & CLASSROOM PRACTICES** Lesson planning and teaching methodologies. Course can only be taken for graduate credit. (3)  
**502. DIVERSITY OF THE ADOLESCENT LEARNER.** Examination of diversity of students in a variety of settings. Course can be taken for graduate credit only. (3)  
**503. MSMT. & EVAL. FOR THE CLASSROOM TEACHER.** Standardized achievement tests and evaluation procedures in schools; practice in conducting tests and evaluation instruments. (3)  
**504. TEACHERS AS LEADERS.** The purpose of this course is to develop school leaders who promote the success of all students by advocating, nurturing, and sustaining a school culture and instructional

program conducive to students learning and staff professional growth. Emphasis will be placed on identifying leadership styles, understanding theories of leadership, and working successfully with individuals of different leadership and management styles. Furthermore, participants in this course will learn to lead without a title. (3)

**505. CLASSROOM FACILITATION AND MANAGEMENT.** The purpose of this course is to involve candidates in a variety of situations that will introduce them to the various ways in which they must manage a classroom. Candidates will explore various techniques to manage student behavior as well as to plan lessons for effective teaching. Candidates will explore effective routines/procedures to assist with organizing their classrooms as well as how to create effective rules, positive recognition, and consequences to guide student behavior. Additionally, they will explore ways to become partners with parents and to set high expectations for "all" of their students. (3)

**526. THE MIDDLE YEARS SCHOOL.** Characteristics, functions of middle years school; its relation to modern educational practice; role of administrators, teachers, students, curriculum, facilities unique to junior high and middle schools. (3)

**557. COMPUTER CONCEPTS AND APP. FOR EDUCATORS.** Professional studies in educational computing and technology; computer/technology skills, concepts, and applications for teachers; use of technology to support content areas; integration of teaching methodologies. Prerequisite: Math Education Majors (or Graduate) , Enrollment restricted to Graduate Education Majors. . (3)

**558. INTEGRATING THE INTERNET IN EDUCATION.** Instructional strategies for integrating the use of the Internet as a teaching and learning tool in education. (3)

**600. ADVANCED METHODS.** Effective implementation of secondary teaching methods for the following content areas: math, English, science, and social studies. May be taken for graduate credit only. (3)

**601. ADVANCED CURRICULUM THEORY AND PRACTICE.** Theories of curriculum; techniques of curriculum building; experiments; evaluation of present trends. (3)

**602. CURRICULUM CONSTRUCTION.** Theory and techniques of curriculum construction; construction of teaching-learning materials adapted to special needs of particular schools. (3)

**616. SCIENCE TECHNOLOGY SOCIETY IN CLASSROOM.** The interrelationships among trends, issues, and strategies in teaching science, technology, and society (STS) will be explored. Students will research, discuss, and critique approaches to teaching STS as well as plan and evaluate different learning strategies. (3)

**625. WRITING, THINKING, AND READING.** Theory underlying best writing practices for narrative, expository and persuasive writing; translating theory and pedagogy into classroom practice for language arts, science, mathematics, and social studies. (3)

**635. REFLECTIVE TEACHING.** Reflecting on current classroom practice through descriptive, analytical, thoughtful, and critical writing. Application of the National Board for Professional Teaching Standards. (3)

**647. THEORY AND PRACTICE IN GEOGRAPHIC EDUCAT.** This course will critically analyze previous and current literature concerning problems in pedagogy, philosophy, learning theory, and research methods in geographic education. (3)

**648. SEMINAR IN GEOGRAPHIC EDUCATION.** The seminar will be a survey and discussion of major topics and themes in geographic education. Geography will be viewed as a school subject that is part of the social studies, as an element of interdisciplinary studies, and as a stand alone subject. (3)

**651. ADVANCED INDIVIDUAL STUDY.** Development of special projects under supervision. (1-6)

**657. INFORMATION TECH. FOR PROF. EDUCATORS.** This course focuses on understanding and selecting educational technologies to enhance personal, pedagogical, and institutional effectiveness. A specific focus will be on the evaluation of technology by critically analyzing current and emerging research in an attempt to develop and incorporate relevant evaluation criteria. Prerequisite: Edci 557 with minimum grade of C. (3)

- 658. TRENDS AND ISSUES IN TEACHING.** Explore trends and issues in the field of teaching in education. (3)
- 674. CUL DIMEN SEC LANG ACQ.** (3)
- 675. TEACHING WITH FILM.** Selected strategies, trends, methods, materials, and legal issues for effectively incorporating film in the K-12 classroom while still meeting the state and national standards. (3)
- 680. ESL PROGRAM ADMINISTRATION.** An in-depth and practical inspection of the various issues related to the administration of English as a second language (ESL) programs in the United States. Prerequisite: Edci 602 with minimum grade of C, TESL 631 with minimum grade of C. (3)
- 697. APPLIED LINGUISTICS IN TESOL.** Students will examine a variety of language problems undertaken in applied linguistics and relate them to major issues in TESOL. (3)
- 727. INTERNSHIP.** Supervised on-the-job experiences in appropriate setting; evaluation; clinical project. Z grade. (3-6)

#### **Driver's Education-Edde**

- 507. SAFETY EDUCATION.** Principles, procedures, and materials for teaching safety in school, home, and community. Required for teaching endorsement. (3)

#### **Early Childhood Education-Edec**

- 500. INTRODUCTION TO EARLY CHILDHOOD EDUC.** Principles, curriculum construction, methods, and materials in early childhood education. (3)
- 551. SCI & NUM CONCEPTS IN EARLY CHILD EDUC.** Development of number and science concepts for nursery school through early elementary; emphasis on content, method, laboratory techniques. (3)
- 553. LANG CONCEPTS & LIT IN EARLY CHILD EDUC.** Language development as communicative skill and expressive art through creative experiences from nursery school through early elementary; childhood literature as stimulus for language and conceptual growth. (3)
- 555. ART & MUSIC IN EARLY CHILDHOOD EDUCATION.** Development of creative expression through art and music in nursery and early elementary years; relationship between creative process and developmental stages. (3)
- 557. SEMINAR: SOCIAL LIVING IN EARLY CH EDUC.** Sociological aspects of the family; meeting nutritional and medical needs; techniques of working with parents, community resources; development of social concepts. (3)
- 570. PROGRAM DEV & ADMIN IN EARLY CH EDUC.** Planning and administering a preschool program: setting goals, physical facilities, program development, scheduling, finances, staff selection and supervision, policy development, and parent involvement. (3)
- 651. ADVANCED INDIVIDUAL STUDY.** Development of special projects under supervision. (Same as Edel 651). (1-6)
- 652. ADVANCED INDIVIDUAL STUDY.** Development of special projects under supervision. (Same as Edel 652). (1-6)
- 661. PRACTICUM I.** Supervised experience in the 3-year-old nursery laboratory school. (3)
- 662. PRACTICUM II.** Supervised experience in the 4-year-old nursery laboratory school. (3)
- 663. PRACTICUM III.** Supervised experience in the 5-year-old nursery laboratory school. (3-6)
- 664. PRACTICUM IV.** A child development center in a disadvantaged area of the community. (3-6)
- 665. PRACTICUM V.** Supervised experience in a multi-age program for 6- to 9-year-old children. (3)
- 667. EARLY CHILDHOOD EDUCATION SEMINAR.** Study of selected philosophical and historical movements that have influenced the development of programs for young children, study of current model programs, and review of selected research related to contemporary issues that affect your children. Z grade. (3)
- 697. THESIS.** No grade. (1-12)

**767. FIELD STUDY.** Report involving original study of a problem in the candidate's field of specialization. Z grade. (1-6)

**Elementary Education-Edel**

**519. TECH. AND PRIN. FOR CLASS. MANAGEMENT.** Basic behavior management principles available to the classroom teacher for effective classroom management. (3)

**520. BOOKS AND RELATED MATERIALS.** Evaluating and using both print and nonprint materials for children (K-8); emphasis on contemporary titles, trends, and issues, and book reviews and talks. (3)

**531. DIFFERENTIATED INSTRUCTION.** Techniques for assessment and remediation of students with learning problems; selection and proper use of appropriate teaching materials. (3)

**601. CHILD GROWTH AND DEVELOPMENT.** Physical, emotional, intellectual, and social growth; emphasis on the effects of different aspects of development of the child; study of children in small and large groups. (3)

**615. PROB. & INVEST. TEACH. ELEM. SCH. SCI.** Science teaching in elementary school; emphasis on developmental activities, teaching resources, and research. (3)

**617. NATURE & STRUCTURE OF LANG. ARTS.** Creative skill aspects of language arts; oral expression, listening, usage, vocabulary, reading, writing, and handwriting. (3)

**620. LITERACY CONNECTIONS IN THE ELEM. SCHOOL.** Focus on integration of the language arts and application in the elementary classroom; attention to speaking, listening, reading, writing, viewing and visually representing across the curriculum. Prerequisite: Edel 617 with minimum grade of C. (3)

**621. BRAIN/MIND THEORIES & THEMATIC APPROACH.** Study of the brain/mind system and implications for thematic integrative planning. Use of units and projects for interdisciplinary teaching. (3)

**623. PROBLEMS IN TEACHING SOCIAL STUDIES.** Materials, methods, and organization of social studies in elementary and secondary schools. (For teachers in service). (3)

**625. PROBLEMS IN TEACHING MATHEMATICS I.** Materials, methods, and organization of mathematics in elementary schools as related to teaching the structure of the real number system and its subsystems. (3)

**627. PROBLEMS OF TEACHING MATHEMATICS II.** Materials, methods, and organization of mathematics in elementary schools as related to teaching the English and metric systems; geometrical/statistical concepts and other topics. (3)

**629. CLINICAL AND DIAGNOSTIC PROC. IN MATH.** Tests and clinical procedures in appraising, diagnosing and remediating children's difficulties with mathematics. (3)

**630. CLINICAL PROJECTS.** A forum for graduate students at the master's degree level who are conducting and reporting on specific clinical studies done in their own classrooms and at other approved clinical sites. (3)

**651. ADVANCED INDIVIDUAL STUDY.** Development of special projects under supervision. (Same as Edec 651). (1-6)

**652. ADVANCED INDIVIDUAL STUDY.** Development of special projects under supervision. (Same as Edec 652). (1-6)

**653. SEMINAR IN ELEMENTARY EDUCATION.** (3-6)

**661. PRACTICUM IN ELEMENTARY EDUCATION.** Supervised experience in enriching educational opportunities for elementary students. (3)

**697. THESIS.** No grade. (1-12)

**700. SEMINAR IN ELEMENTARY EDUCATION.** Problems in elementary education; emphasis on individual research for doctoral students. Prerequisite: Doctoral students only. (3-6)

**727. INTERNSHIP.** Supervised on-the-job experiences in appropriate settings; evaluation; clinical project. Z grade. (3-6)

**767. FIELD STUDY.** Report involving original study of a problem in the candidate's field of specialization. Z grade. (3)

**797. DISSERTATION.** No grade. (1-18)

### **Literacy Education-Edlt**

**601. LITERACY FOUNDATIONS: THEORY HISTORY.** This course is designed to focus on the major theoretical models of literacy learning, the history of literacy education and research (current and past). In addition, candidates will focus on implications of the above as related to current practice and research. (3)

**602. EARLY LITERACY DEVELOPMENT.** This course is designed to address essential skills and concepts for beginning literacy development. Language development, phonemic awareness, phonics, comprehension, fluency, and motivation will be incorporated from a comprehensive reading perspective. (3)

**603. EXPANDING LITERACY DEVELOPMENT.** This course is designed to encompass reading/literacy instruction from fourth through 12th grades. Decoding, comprehension, fluency, attitudes, motivation, and engagement will be addressed. Issues and trends in expanding reading will be researched, and classroom programs will be investigated. Prerequisite: Edlt 602 with minimum grade of C. (3)

**604. EFFECTIVE LITERACY ASSESS AND INTERVENT.** The focus of this course is the role of the literacy leader as a diagnostician in the classroom. Candidates will learn how to administer measures of literacy assessments that can be used for individuals or whole groups. Candidates will analyze data, plan appropriate interventions, and implement the interventions. Prerequisite: Edlt 602 with minimum grade of C, Edlt 603 with minimum grade of C. (3)

**605. CONTENT AREA LITERACY.** This course is designed to focus on how to integrate literacy within the content areas at all grade levels. (3)

**606. LITERATURE FOR CHILDREN AND ADOLESCENTS.** This course is designed to offer a survey of current and classic literature in grades pre-K-12. Issues and trends in literature for the child and adolescent will be researched and evaluations of quality literature across genres will be conducted. (3)

**607. LITERACY LEADERSHIP.** This course is designed to prepare candidates to become literacy leaders--focusing on the role of the literacy coach--within schools, school districts, and state agencies by helping candidates plan, implement, and evaluate literacy programs. Prerequisite: 18 Hours in Literacy completed prior to taking this course. . (3)

**608. LITERACY INTERNSHIP I.** This course provides the candidate with a 40-hour experience in supervised settings with elementary students and teachers. Interns administer diagnostic assessments and implement instruction based on the results. In addition, interns work with whole-class and small-group instructional strategies for providing K-6 students with effective literacy instruction. (3)

**609. LITERACY INTERNSHIP II.** This course provides the candidate with a 40-hour experience in supervised secondary school settings with teachers and with students in grades 7-12. Interns administer diagnostic assessments and implement instruction based on the results. In addition, interns work with whole-class and small-group instructional strategies for providing students in grades 7-12 with effective literacy instruction. (3)

### **Reading Education-Edrd**

**500. BASIC SKILLS IN READING.** Introduction to reading; history, overview of the field, and basic instructional procedures. (3)

**615. MAT & METH OF RDG IN THE ELEM. SCHOOL.** Organization of reading instruction in elementary school. (3)

**616. DIAGNOSTIC AND REMEDIAL READING.** Classroom evaluation and correction of reading difficulties. Effective use of formal and informal tests to determine student needs. Selection of appropriate methods and materials for remedial instruction. (3)

**617. CLINICAL DIAG. & CORRECTION OF RDG PROB.** Tests, inventories, and clinical procedures in appraising and remediating reading difficulties in a clinic setting. (3)

**651. ADVANCED INDIVIDUAL STUDY.** Development of special projects under supervision. (1-6)

**652. ADVANCED INDIVIDUAL STUDY.** Development of special projects under supervision. (1-6)

## Edrs

**600. ACTION RESEARCH.** The purpose of Edrs 600, Action Research, is to acquaint candidates with principles of research methodology and associated statistical processes specifically focused on action research. Interpreting data and results of studies are an important part of becoming a reflective practitioner and well suited for action research. As a result of this course, candidates can apply research findings in educational settings as well as identify problems and challenges that can be investigated through action research conducted in classrooms and other contexts. (3)

**610. LITERACY RESEARCH.** This course is designed to focus on the methodologies, findings, and current directions in literacy research. The course focuses on understanding quantitative and qualitative research in literacy education. Prerequisite: Enrollment restricted to M.Ed. in literacy education majors. (3)

## Secondary Education-Edse

**525. LITERATURE FOR TODAY'S TEENAGERS.** Selection and evaluation of current titles appropriate for ages 13-19; extensive reading of contemporary fiction and nonfiction; emphasis on interests of teenagers, trends and issues, and book reviews and book talks. (3)

**610. NATIONAL AND STATE ISSUES IN EDUCATION.** Exploration of educational innovation in school structures, assessment, technology, curriculum, and teacher development. (3)

**625. TRENDS AND ISSUES IN SECONDARY EDUCATION.** Investigation and evaluation of significant current issues in secondary education; emphasis on individual research for specialist and doctoral students. (3)

**631. CURRICULUM PLANNING FOR ART EDUCATION.** Problems in curriculum development for art programs in public schools. (3)

**633. MUSIC IN THE SECONDARY SCHOOL.** Methods of implementing the music program in secondary schools. (3)

**636. TEACHING SECONDARY SCHOOL SCIENCE.** Practical instructional experiences related to concepts, curriculum, and evaluation in science education. Emphasis will be on readings, discussion, investigations, instructional objectives, laboratory safety, content, materials, and methods. (3)

**642. ADVANCED METHODS OF TEACHING ENGLISH.** Materials, methods, and organization of English in the secondary school. (3)

**644. ADV. METH. OF TEACH VOCATIONAL HOME ECON.** Materials, methods, and organization of vocational home economics in secondary school. (3)

**645. ADVANCED METH. OF TEACHING MATHEMATICS.** Materials, methods, and organization of mathematics in secondary school. (3)

**646. ADVANCED METHODS OF TEACHING SCIENCE.** Materials, methods, and organization of natural sciences in secondary school. (3)

**647. ADV. METHODS OF TEACHING SOCIAL STUDIES.** Materials, methods, and organization of social studies in secondary school. (3)

**648. ADVANCED METHODS OF TEACHING SPEECH.** Materials, methods, and organization of speech in the secondary school. (3)

**651. ADVANCED INDIVIDUAL STUDY.** Development of special projects under supervision. (1-6)

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**653. WORKSHOP IN HOME ECONOMICS EDUCATION.** Current trends in home economics education and the development of teaching materials in relation to these trends. May be repeated for credit. (3-6)

**655. TRENDS IN YOUNG ADULT LITERATURE.** Contemporary titles and issues in young adult literature will be discussed. A major focus will be on using these books as bridge to the classics. (3)

- 657. SEMINAR IN MUSIC EDUCATION.** Current educational principles, methods, materials; application to actual teaching through simulation, action research, seminar discussion, readings in music education literature. (Same as Mus 622). (3)
- 665. USE OF TECHNOLOGY IN SECONDARY MATH.** Instructional methodologies and strategies for integrating the use of technology as a teaching and learning tool for secondary math. (3)
- 690. MASTERS SEMINAR IN SECONDARY EDUCATION.** Analysis of current practices and trends in secondary schools. (3)
- 697. THESIS.** No grade. (1-12)
- 700. SEM.: CONTEMPORARY ISSUES IN SEC. EDUC.** Investigation and evaluation of significant current issues in secondary education; emphasis on individual research for doctoral students. Prerequisite: Doctoral students only . (3)
- 727. INTERNSHIP IN SECONDARY EDUCATION.** Z grade. (3-6)
- 767. FIELD STUDY.** Report involving original study of a problem in the candidate's field of specialization. Z grade. (3)
- 797. DISSERTATION.** No grade. Prerequisite: Consent of Department Chairperson Required. (1-18)

### **Special Education-Edsp**

- 541. EDUCATIONAL ASSESSMENT, METH & MAT I.** Basic assessment procedures of individual levels of functioning for pre-academic, elementary, and secondary programming levels. (3)
- 543. EDUCATIONAL ASSESSMENT METH/MAT II.** Selection and application of specialized instructional methods and materials for the educationally handicapped at the pre-academic, elementary, and secondary levels. (3)
- 545. EDUCATIONAL ASSESSMENT METH/MAT III.** Development of individualized educational plans (IEPs), implementation of individualized programming, and evaluation of programming effectiveness for the educationally handicapped at the pre-academic, elementary, and secondary school levels. (3)
- 552. PRAC. & FIELD EXPER. WITH EXCEP. CHILD.** This course provides students with a supervised experience with persons who exhibit various types of disabilities. Z grade. (3)
- 585. EDUCATION OF GIFTED STUDENTS.** Overview of the field of gifted education, including identification, assessment, learning characteristics, education, and models for delivery of services. Prerequisite: Graduate Program Level Only. (3)
- 590. METHODS & MATERIALS FOR THE GIFTED.** Teaching strategies, selection of materials, the development of special programs, and evaluation procedures for the gifted. Prerequisite: Graduate Program Level Only. (3)
- 595. DIFFERENTIATED INSTRUCTION ATYPICAL GIFT.** Dealing with cultural diversity and meeting the social and emotional needs of diverse populations, including social, emotional needs of gifted. (3)
- 628. REHABILITATION TECHNIQUES.** Principles in rehabilitation; educational, mental, social, vocational, rehabilitation of physically and emotionally challenged; educational needs of handicapped of teens and adults. (3)
- 631. ORGANIZATION OF SPECIAL EDUCATION.** The referral to placement process. Federal, state, and local laws, policies, and procedures. Financial bases, community resources, service delivery systems, program development, and models of instructional implementation. (3)
- 651. ADVANCED INDIVIDUAL STUDY.** Development of special projects under supervision. (1-6)
- 674. SEMINAR IN SPECIAL PROBLEMS.** Selected special education and rehabilitation problems. (3)
- 676. EDUC. & PSY. OF EMOTIONALLY DISTURBED.** Etiology, classification, identification, personality development, and characteristic behavior of emotionally disturbed children and youth. (3)
- 678. EDUC. PROC. FOR THE EMOTION. DISTURBED.** Procedures, organization, techniques, methods, materials; behavioral strategies used in education of the emotionally disturbed. (3)



**680. ADV. METH. & MANAG. FOR THE EMOT. DIST.** Procedures, organization, techniques, methods, materials; behavioral strategies used in education of the emotionally disturbed. Prerequisite: Edsp 676 with minimum grade of C, Edsp 678 with minimum grade of C. (3)

**683. READINGS IN RESEARCH WITH EXCEP. CHILD.** An overview of the basic and applied research completed to date with handicapped children. Review of the categorical types of handicaps, including the etiological, psychological, educational, and vocational aspects of exceptionality. (3)

**686. EDUC. & PSY. OF CHILD WITH SPC. LRN. DIS** Overview of the field of learning disabilities (SLD) through study of the historical development of the field. The interdisciplinary nature of SLD. Psychological and behavioral characteristics of SLD. Basic assessment and diagnostic strategies. Current issues and trends in providing services to children with SLD. (3)

**688. EDUC. & PSY. OF THE MENTALLY RETARDED.** Overview of the field of mental retardation including causes, assessment learning characteristics, education, and models for delivery of services. (3)

**690. CURRICULUM AND PROGRAM DEVELOPMENT.** Evaluation, development of curriculum and programs for gifted students and clinical practice. Prerequisite: Instructor Approval Required. (3)

**697. THESIS.** No grade. (1-12)

**767. FIELD STUDY.** Report involving original study of a problem in the candidate's field of specialization. Z grade. (3)

### **Education-Educ**

**523. GROUP STUDY OF PROB. IN SCHOOL SYSTEMS.** Areas/problems approved by instructor. (For groups of teachers interested in improving subject areas of working on problems within system). May be repeated for credit to a maximum of 6 hours. Z grade. (1-6)

**555. SPECIAL TOPICS IN EDUCATION.** A special topics course designed to meet the in-service needs of school districts of Mississippi. Graduate students may use 6 semester hours toward a degree. (1-6)

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## **LEADERSHIP AND COUNSELOR EDUCATION**

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Associate Professor Timothy Letzring, chair • 120 Guyton Hall

Overview: The Department of Leadership and Counselor Education offers graduate degrees in three general areas: higher education, K-12 leadership, and counselor education. These graduate degrees are a Master of Arts (M.A.) in higher education/student personnel; a Doctor of Philosophy (Ph.D.) in higher education; a Master of Education (M.Ed.) and Education Specialist (Ed.S.) in educational leadership; a Doctor of Philosophy (Ph.D.) in education with emphasis in educational leadership/K- 12; and a Master of Education (M.Ed.), Education Specialist (Ed.S.), and Doctor of Philosophy (Ph.D.) in counselor education.

Accreditation: The program follows the standards of NCATE and ELCC.

### **M.Ed. in Counselor Education**

Description: The M.Ed. in counselor education must be completed with either an option in school counseling or community counseling. The program requires satisfactory completion of courses and course experiences, development of basic counseling skills, performance in practicum and internship, and demonstration of specific clinical competencies beyond class requirements.

Accreditation: The M.Ed. program's academic and experiential requirements meet the accreditation requirements of the Council for the Accreditation of Counselor and Related Educational Programs (CACREP).

Goals/Mission Statement: The general objective of the M.Ed. in counseling is to prepare students to be professional counselors. The counselor education faculty believes that the development of a strong professional identity, a rich knowledge base, and expertise in the skills of counseling are essential to becoming a professional counselor. The program's first priority is to serve the people of Mississippi by providing highly qualified counselors.

Course Requirements: To complete the M.Ed. in counselor education, a student must complete the following core courses and also complete specific courses for either the option in school counseling or community counseling.

Core courses for the M.Ed. include

Coun 539-Introduction to the Counseling Profession

Coun 570-Multicultural Counseling

Coun 672-Seminar in Legal and Ethical Issues

Coun 643-Group Procedures

Coun 594-Play Therapy

Coun 683-Counseling Theory

Coun 690-Counseling Skills

Coun 605-Research in Counseling

Coun 601-Lifespan Development

Coun 680-Career Counseling

Coun 621-Assessment

Coun 693-Practicum

Coun 688-Counseling Children and Adolescents

Coun 695-Internship (6)

Coun 682-Family Counseling

Other Academic Requirements: Along with the scholarship aspect of the program, which is the mastery of academic content, the master's program in counselor education requires students to demonstrate competencies in the core competency areas outlined in the Council for the Accreditation of Counseling and Related Educational Programs (CACREP) 2001 Standards.

All master's degree students in the counselor education program are required to pass the Counselor Preparation Comprehensive Examination (CPCE). Students will retake the CPCE until they can achieve a passing score.

### **School Counseling Option**

Description: The M.Ed. in counselor education/school counseling option requires that all students successfully complete a range of program experiences. Graduates of this program should be prepared for counselor positions in K-12 schools.

Course Requirements: Beyond the M.Ed. counselor education core courses, the school counseling option requires the following course: Coun 688-Organization, Administration, and Consultation in School Counseling.

### **Community Counseling Option**

Description: The M.Ed. in counselor education/community counseling option requires that students complete a range of program experiences. Graduates of this program are prepared to become community counselors in public and private community settings.

Course Requirements: Beyond the core course requirements for the M.Ed. program, the community counseling option also requires the following courses:

Coun 685-Organization, Administration, and Consultation in Community Counseling

Coun 674-Diagnostic Systems in Counseling

Electives (6)

### **Ed.S. in Counselor Education**

Overview: The Department of Leadership and Counselor Education offers graduate degrees in three general areas: higher education, K-12 leadership, and counselor education. These graduate degrees are a Master of Arts (M.A.) in higher education/student personnel; a Doctor of Philosophy (Ph.D.) in higher education; a Master of Education (M.Ed.) and Education Specialist (Ed.S.) in educational leadership; a Doctor of Philosophy (Ph.D.) in education with emphasis in educational leadership/K-12; and a Master of Education (M.Ed.), Education Specialist (Ed.S.), and Doctor of Philosophy (Ph.D.) in counselor education.

Accreditation: The specialist program in professional counseling is located in the counselor education program in the Department of Leadership and Counselor Education in the NCATE-accredited School of Education. The program's academic and experiential requirements meet the accreditation requirements of the Council for the Accreditation of Counselor and Related Educational Programs (CACREP).

Preliminary Requirements: This degree program is conceived as an 18-hour, one-year inclusive program that includes two required content-based courses that would focus on school leadership and preparation for the NCSC exam, two 3-hour internships, and two electives.

The program will be delivered completely online with distance supervision provided for the internship course work.

Description: The Ed.S. in counselor education is designed specifically for school counselors. Completion of this degree will partially fulfill requirements in the state of Mississippi for AAA school counselor licensure.

Course Requirements: The Ed.S. in counselor education requires 18 hours of course work to include

Coun 653-Group Counseling Practicum

Coun 682-Family Counseling

Coun 674-Diagnostic Systems in Counseling

One 3-hour elective and 6 hours of Coun 695-Internship

This set of requirements is built upon the following courses for the M.Ed. in counselor education (48 hours). The student may be required to take these courses if any of them are not in his/her record: Coun 539, 570, 594, 601, 605, 621, 643, 680, 683, 672, 686, 690, 688, 693, and 695.

### **Ed.S. in Counselor Education/Play Therapy**

Description: The Ed.S. in counselor education/play therapy option is designed for mental health clinicians specializing in play therapy. Completion of this degree will partially fulfill requirements for certification as a Registered Play Therapist (RPT) with the Association for Play Therapy. The program will be delivered completely online with distance supervision for the practica in play therapy.

Preliminary Requirements: The 18-hour play therapy Ed.S. degree requires completion of a master's degree in either professional counseling, school counseling, social work, marriage and family therapy, or psychology from an accredited college.

### **Ph.D. in Counselor Education**

Description: The doctoral program in counselor education is located in the Department of Leadership and Counselor Education in the NCATE-accredited School of Education. The program's academic and experiential requirements meet the accreditation requirements of the Council for the Accreditation of Counselor and Related Educational Programs (CACREP).

Preliminary Requirements: A prerequisite for admission to the Ph.D. in counselor education is a master's degree in counseling that includes CACREP required core and program area curricular components. Preference will be given to applicants who are graduates of CACREP-accredited programs.

GRE verbal, quantitative, and writing scores are also required.

Goals/Mission Statement: The Ph.D. in counselor education prepares a graduate to become a counselor educator.

Course Requirements: Course requirements for the Ph.D. in counselor education include

- Coun 783-Advanced Counseling Theory
- Coun 794-Advanced Group Counseling
- Edrs 701-Educational Statistics II
- Coun 687-First-year Seminar (twice for credit)
- Coun 750-Research and Publication in Counselor Education
- Coun 753-Supervision of Counseling Services
- Coun 793-Advanced Practicum
- Coun 795-Internship (12 hours)
- Edld 662-College Teaching
- Coun 751-Qualitative Perspectives in Counselor Education
- Coun 754-Advanced Clinical Supervision
- Coun 752-Qualitative Methods and Analysis for Counselor Educators
- Edrs 705-Educational Research II
- Coun 797-Dissertation (18 hours)

Students will develop a minimum of one core content area specialization and a counseling major specialization in community or school counseling. Core content area specializations involve developing advanced level competencies in courses that correspond to the eight core content areas described in CACREP accreditation standards and play therapy. Counseling major specializations involve developing advanced level competencies in courses designed to fulfill requirements for master's level counseling majors in school or community counseling. The above course list gives the standard program requirements, but specific requirements will be developed individually to best fit students' objectives and prior experiences. This is outlined more specifically in the Counselor Education Doctoral Handbook.

Other Academic Requirements: Students must complete a comprehensive examination, a dissertation prospectus, and prepare and defend a dissertation.

### **M.A. in Higher Education/Student Personnel**

Overview: The Department of Leadership and Counselor Education offers the Master of Arts degree program in higher education/student personnel in a traditional face-to-face mode on the main campus in

Oxford. In 2008, the program was expanded by the delivery of the M.A. degree to the University Medical Center in Jackson and to other regional campuses (Southaven, Tupelo, Booneville, and Grenada), through a combination of compressed video, face-to-face delivery, and online delivery. This latter M.A. program has been established as a cohort program and is generally referred to as the professional cohort M.A. in higher education/student personnel.

Accreditation: The M.A. in higher education/student personnel is located in the National Council for Accreditation of Teacher Education (NCATE) accredited School of Education and follows the standards outlined by the Council for the Advancement of Standards in Higher Education (CAS).

Additional Information: The online M.A. in higher education/student personnel is a 42-semester-hour graduate program and is completed over a 26-month period with students pursuing the program on a part-time basis, completing the classes at a rate of two classes per semester/session. Students are admitted in the summer session as a cohort group and complete the curriculum in a lockstep sequence. The program employs alternative methods of delivering course content, including Internet learning systems, audio/video conferencing, and an assortment of streaming media content. In addition to the online delivery of course work, there are two required on-campus residencies (at the beginning and near the end of the program) in Oxford in which students and faculty are able to interact.

Description: The M.A. in higher education/student personnel is designed to prepare qualified students for entry-level positions in higher education and/or student personnel. Graduates have found employment as higher education professionals in a variety of areas, including housing, career counseling, international student affairs, financial aid, student activities, Greek life, and development, just to name a few.

Course Requirements: The requirements for the M.A. in higher education/student personnel include  
Edfd 609-The Cultural Context of Education  
Edrs 605-Educational Research I  
Edld 658-Organization and Governance of Higher Education  
Edld 659-Finance of Higher Education  
Edld 660-History of Higher Education  
Edld 664-Law in Higher Education  
Edld 665-Cont. Issues of Higher Education  
Edld 667-Practicum  
Edld 668-Practicum (required only of students having no higher education work experience and no current assistantship in higher education)  
Edld 689-Student Services in Higher Education  
Edld 691-The College and the Student  
12 hours of electives if Edld 668 is not required

Other Academic Requirements: Students must complete a final portfolio as a part of their comprehensive examination.

### **Ph.D. in Higher Education**

Description: The Ph.D. in higher education prepares higher education administrators following the practitioner-scholar model. The intent of the doctoral program is to offer advanced course work and experiences that provide the student with greater knowledge of higher education and the leadership aspects associated with such organizations.

Preliminary Requirements: Applicants must have a master's degree, two years' employment experience at a college or university, competitive scores on the GRE, and excellent writing skills.

Course Requirements: Course requirements for the Ph.D. in higher education include

Edrs 501-Educational Statistics I

Edrs 605-Educational Research I

Edrs 700-Models of Inquiry and Literature Review

Edrs 701-Educational Statistics II

Edrs 704-Foundations of Qualitative Methodology

Edrs 705-Educational Research II

Edfd 609-Cultural Context of Education

Edld 750-Organizational Improvement

Edld 659-Finance of Higher Education

Edld 662-College Teaching

Edld 664-Law of Higher Education

Edld 660-History of Higher Education

Edld 665-Contemporary Issues of Higher Education

Edld 760-Advanced Educational Policy Analysis

Other requirements are 6 hours in the leadership component, a minimum of 12 hours of higher education electives, and 18 hours of teaching cognate/minor.

Other Academic Requirements: Students must pass a written comprehensive examination, prepare a dissertation prospectus, and then successfully write and defend their dissertation.

### **M.Ed. in Educational Leadership**

Description: The M.Ed. in educational leadership is designed to prepare public school administrators for Class AA and AAA certification.

Preliminary Requirements: Prerequisites for admission to the M.Ed. in educational leadership include

1. Hold a Class A teacher's certificate;
2. Minimum two years' successful (K-12) teaching experience;
3. Have at least 3.0 GPA;
4. Competitive scores on the Graduate Record Examination; must be less than five years old (verbal, quantitative, and writing sections);
5. Exhibit proficient writing skills on position paper(s);
6. Evidence of leadership potential;
7. Three references, and
8. Successful interview.

Goals/Mission Statement: The M.Ed. in educational leadership prepares leaders using a cohort model. The program provides candidates with the knowledge, skills, and dispositions to meet ELCC standards and leads to AA certification for K-12 public school administrators.

Course Requirements: The M.Ed. in educational leadership requires 36 hours of the following course work:

Edld 641-Law and Ethics in Education (3) and Edld 642-Managing Operations for Learning (3) or Edld 675-Policy, Integrity, Ethics, Legal, and Political Issues (6)

Edld 671-Leading Quality Instruction (6)

Edrs 673-Data Led Curriculum and Assessment (6) or Edld 673-Organization and Management (6)

Edld 674-Developing Quality Teaching (6)

Edld 676-Leading Change in Educational Org. (6) or Edld 672-Common Ground: School and Community (6)

Edld 656-Administrative Internship (6)

### **Ed.S. in Educational Leadership**

Description: The Ed.S. in educational leadership is designed to prepare public school administrators for Class AA and AAA certification. The program affords students excellent opportunities to expand their leadership capabilities at the building level.

Preliminary Requirements: Prerequisites for admission to the Ed.S. in educational leadership include

1. Hold a master's degree outside of leadership,
2. Hold Class AA teacher's certification,
3. Minimum two years successful (K-12) teaching experience,
4. Minimum 3.0 GPA,
5. Competitive scores on the Graduate Record Examination; must be less than five years old (verbal, quantitative, and writing sections),
6. Exhibit proficient writing skills on position paper(s),
7. Evidence of leadership potential,
8. Three references, and
9. Successful interview.

Goals/Mission Statement: The Ed.S. in educational leadership program provides candidates with the knowledge, skills, and dispositions to meet ELCC standards and leads to AAA certification for K-12 public school administrators.

Course Requirements: The Ed.S. in educational leadership requires 36 hours of the following course work:  
Edld 641-Law and Ethics in Education (3) and Edld 642-Managing Operations for Learning (3) or Edld 675-Policy, Integrity, Ethics, Legal, and Political Issues (6)  
Edld 671-Leading Quality Instruction (6)  
Edrs 673-Data Led Curriculum and Assessment (6) or Edld 673-Organization and Management (6)  
Edld 674-Developing Quality Teaching (6)  
Edld 676-Leading Change in Educational Org. (6) or Edld 672-Common Ground: School and Community  
Edld 656-Administrative Internship (6)

### **Ph.D. in Education**

Preliminary Requirements: Different entrance requirements exist for the emphasis in secondary education (to be found under Curriculum and Instruction) and the emphasis in educational leadership:

#### **Educational Leadership/K-12**

The educational leadership doctoral program admits once per year for the spring semester. Prerequisites include

1. Holding a master's degree from a regionally accredited institution of higher education
2. Having at least a B average on all previous graduate work applicable to the doctoral program
3. Having at least two years' successful experience as a licensed professional in a school or school district (K-12)
4. Making a competitive score on the Graduate Record Examination (verbal, quantitative, and writing sections)
5. Exhibiting proficient writing skills on position papers
6. Evidence of successful performance as a leader

### **Ph.D. in Education with Emphasis in Educational Leadership**

Description: The Ph.D. in education with emphasis in educational leadership offers practicing professionals additional education for positions in the schools, school districts, and higher education as faculty.

Course Requirements: The Ph.D. in education with emphasis in educational leadership requires the following courses:

Educational Leadership Core (24 hours):

Edfd 609-Cultural Context in Education

Edld 630-Organization-Environment Interaction

Edld 694-Human Resource Development

Edld 700-Administrative Theory

Edld 721-Leadership and Management

Edld 730-Multidisciplinary Perspectives on Leadership

Edld 750-Organizational Improvement

Edld 756-Internship (required)

Research Component (12 hours):

Edrs 501, 701-Educational Statistics I, II

Edrs 605, 705-Educational Research I, II

Approved Electives (18 hours): outside the leadership emphasis, with 9 hours outside the School of Education

Specialty Courses (21 hours): K-12 administration courses

Dissertation (18 hours)

Other Academic Requirements: All doctoral students must complete a minimum of 36 hours of course work in residence at the University of Mississippi. All courses in the leadership core and Edrs 605, 701, and 705 must be taken in residence.

A written comprehensive examination encompassing the leadership core, research, and area of specialization is taken upon completion of course work. After passing the comprehensive examination, students must enroll for at least 3 hours of dissertation credit in two of the three semesters each year and must earn at least 18 hours of dissertation. Students must complete a dissertation prospectus and must complete and orally defend a dissertation.

#### **Counselor Education-Coun**

**503. PSYCHOMETRIC PRINCIPLES.** Introduction to the principles and concepts basic to measurement. Test construction, evaluation procedures, interpretation, and ethics related to testing are emphasized. Knowledge of basic statistical principles is required. Prerequisite: Edrs 501 with minimum grade of C. (3)

**523. GROUP STUDY OF PROBLEMS.** Area/problems approved by instructor. For groups interested in improving areas/problems within an agency/system. Z grade. (3-6)

**539. INTRODUCTION TO THE COUNSELING PROFESSION.** History and overview of counseling as a profession. An introduction to philosophical foundations, multicultural factors, services, theories and systems, contributors, and ethics. (3)

**545. LAB-INTERPERS COMM SKL.** Experimental seminar in communication skills and group methods; emphasis on the dynamics of interpersonal relationships with consideration of current theoretical perspectives. Z grade. (1-3)

**551. INDIVIDUAL STUDY.** Development of special projects under supervision. (1-6)



**570. MULTICULTURAL ISSUES IN COUNSELING.** Introduction to cultural diversity issues and exploration of multicultural concepts related to the counseling profession. (3)

**573. LEARNING SEMINAR.** Systems and principles of learning. Various contributors and their theories. Knowledge of basic learning principles is required. May be repeated for credit. (3)

**593. TOPICS IN COUNSELING I.** Topical format to address areas of interest to professional counselors. May be repeated for credit. (3)

**594. TOPICS IN COUNSELING II.** Topical format to address areas of interest to professional counselors. May be repeated for credit. (3)

**595. TOPICS IN COUNSELING III.** Topical format to address areas of interest to professional counselors. May be repeated for credit. (3)

**601. LIFE SPAN DEVELOPMENT.** Physical, emotional, and social growth. Emphasis on development across the life span. (3)

**603. ADVANCED EDUCATIONAL PSYCHOLOGY.** Survey of applied psychology in education; integration of learning theory and practice. (3)

**605. RESEARCH IN COUNSELING.** An introduction to research methods, statistical analysis, needs assessment, and program evaluation as it relates to the field of counseling. Research activities, computational and computer applications, critical consideration of research and accountability as scientist-practitioner will be emphasized. (3)

**610. ADDICTIONS.** The course reviews addictive processes and disorders from historical and current perspective. Included are theoretical models of understanding and treating misuse, abuse, and addiction. Assessments and comorbidity are reviewed to assess severity of addiction, develop treatment plans, and determine treatment setting. (3)

**621. ASSESSMENT IN COUNSELING I.** Basic assessment principles including achievement, aptitude, and intelligence tests, interest and personality inventories, clinical interviews, case conferences, and observations. (3)

**622. ASSESSMENT IN COUNSELING II.** Continuation of Coun 621 with more detail and emphasis on personality measures and advanced assessment techniques. (3)

**623. INDIVIDUAL ASSESSMENT I.** Administration, scoring, and interpretation of individual measures of intelligence (emphasis on Wechsler Scales), achievement, adaptive behavior, and related areas. Prerequisite requirements for this course may also be satisfied by equivalent course work as approved by the department and by consent of instructor. Prerequisite: Coun 621 with minimum grade of C. (3)

**624. INDIVIDUAL ASSESSMENT II.** Continuation of Coun 623 with emphasis on Stanford-Binet Intelligence Scale. Prerequisite requirements for this course may also be satisfied by equivalent course work as approved by the department and by consent of instructor. Prerequisite: Coun 621 with minimum grade of C. (3)

**625. PRACTICUM IN SCHOOL PSYCHOMETRY.** On-site practicum with emphasis on administration, scoring, and interpretation of intellectual assessment instruments. Prerequisite requirements for this course may also be satisfied by equivalent course work as approved by the department and by consent of instructor; application must be submitted and approved during the preceding semester. Z grade. Prerequisite: Coun 623 with minimum grade of Z. (3-6)

**643. GROUP PROCEDURES.** Principles and dynamics of group interaction and process are examined from didactic and experiential perspectives. Application to areas of group counseling in various settings will be considered with reference to research and pertinent issues. (3)

**652. ADVANCED INDIVIDUAL STUDY.** Development of special projects under supervision. (1-6)

**653. GROUP COUNSELING PRACTICUM.** Supervised practicum in leading and co-leading a group; emphasis on therapeutic factors, tasks, and techniques of the leader. Examination of research and major theories as well as ethical concerns. Prerequisite: Coun 643 with minimum grade of C, Coun 693 with minimum grade of C. (3)

**670. PSYCHOLOGICAL CONSULTATION.** Principles and systems of consultation for use by the professional counselor. Specific techniques and role issues are presented from theoretical and applied perspectives. (3)

**672. SEMINAR: ISSUES AND ETHICS IN COUNSELING.** Current ethical and legal guidelines and professional issues relevant to training, research, and practice in counseling. (3)

**674. DIAGNOSTIC SYSTEMS IN COUNSELING.** Various facets of diagnosis within assessment process. Structure of the Diagnostic Statistical Manual IV (DSM IV) and its use in counseling. (3)

**675. ADVANCED SCHOOL COUNSELING.** This course for school counselors will focus on developing school counseling knowledge and practice with specific emphases on school leadership and culture, systemic change, and use of data. (3)

**676. LDRSHP, ADVOCACY, & ACCTBILITY IN SC.** The course provides a comprehensive study of contemporary practices of leadership, advocacy, and accountability in the school counseling profession. (3)

**680. CAREER COUNSELING.** Career development theories and application to counseling. Implementation of educational, occupational, social informational, and placement services within counseling. (3)

**682. FAMILY COUNSELING.** This course provides an overview of the historical roots of family counseling and the major theoretical orientations. A brief overview of the role of research, multiculturalism and ethics in family counseling is explored. (3)

**683. COUNSELING THEORY I.** Theories and systems of counseling/therapy. Foundations for an integrative approach to helping relationships based on major theoretical and research perspectives. (3)

**685. ORG/ADM & CONSULTATION: COMM. COUNSELING.** Organization, administration, and evaluation of community counseling programs in various settings. Effective service delivery within the guidelines of current professional and ethical standards. (3)

**686. COUNSEL/CHILD AND ADOLESCENTS.** Counseling interventions specific to school-age clients. Theories, techniques, and considerations specific to the developmental needs of children and adolescents. (3)

**687. SEMINAR IN SPECIAL PROBLEMS.** Selected problems. May be repeated for credit. (1-3)

**688. ORG/ADM & CONSULTATION: SCHOOL COUNSELIN.** Organization, administration, and evaluation of school counseling programs in various settings. Effective service delivery within the guidelines of current professional and ethical standards. (3)

**690. COUNSELING SKILLS.** Preparation for supervised counseling practicum. Students are taught a conceptual model for counseling process. Exercise in self-awareness and skills for the stages of the helping relationship. Prerequisite: Coun 683 with minimum grade of C, Instructor Approval Required. (3)

**693. PRACTICUM IN COUNSELING.** Supervised experience in counseling with application of principles, techniques, and strategies acquired in previous course work. Skill acquisition and demonstration of competencies. Z grade. Prerequisite: Coun 690 with minimum grade of Z. (3-6)

**695. INTERNSHIP.** Supervised counseling internship at an approved site. Program faculty approval; application must be completed during the preceding semester; for Coun majors only. Z grade. (3-6)

**697. THESIS.** No grade. (1-12)

**700. ADVANCED TOPICS IN COUNSELOR EDUCATION.** This course provides detailed exploration in specific areas of counselor education (social and cultural diversity, human growth and development, assessment, career development, and ethical and legal issues). (3)

**750. RESEARCH & PUBLICATION IN COUNSELOR ED.** Explores issues, methodologies and critical lines of inquiry in counselor education literature. Examines publication processes for journals and textbooks in counselor education. Emphasizes peer review writing projects. (3)

**751. QUALITATIVE PERSPECTIVES IN COUNSELOR ED.** Contrasts modernist, postmodern, and social constructionist perspectives. Compares philosophical positions, methods, and objectives of essential qualitative approaches. Examines approaches sensitive to research objectives of counselor educators. Emphasizes design and conceptualization of qualitative. (3)

**752. QUALITATIVE METHODS & ANALYSIS COUNSELOR.** Project-based course. Includes collecting and analyzing qualitative data and writing results. Employs various data collection methods and Grounded Theory analytic tools and coding procedures. Prerequisite: Coun 751 with minimum grade of C. (3)

**753. SUPERVISION OF COUNSELING SERVICES.** Principles and methods involved in supervising and evaluating counseling processes, psychological services, testing. May be repeated for credit. (3)

**754. ADVANCED CLINICAL SUPERVISION.** This course reviews theories and models of supervision in order to promote the development of skills and professional behaviors in the practice of clinical supervision. Supervision experiences are taped and reviewed and evaluated by faculty. (3)

**767. FIELD STUDY.** Report involving original study of a problem in the candidate's field of specialization. Z grade. (1-6)

**770. INTRODUCTION TO PLAY THERAPY.** This course is a comprehensive overview of counseling children through play. A review of methods used in play therapy, along with the implications for play therapy and multicultural issues will be addressed. Students will learn the basic interpersonal skills needed to work with children. (1-3)

**771. EXPRESSIVE ARTS W/ CHILDREN & ADOLESCENT.** This course is an introduction to a variety of expressive arts modalities that can be used in clinical practice with children and adolescents. The course will include information and techniques from the following areas: Art Therapy, Music Therapy, Dance/Movement Therapy, Drama Therapy, Poetry/Written Expression Therapy, and Sandtray Therapy. (1-3)

**772. CURRENT THEORIES IN PLAY THERAPY.** This course is a comprehensive overview of theoretical foundations of play therapy. Students will learn various theories and will be expected to assimilate those theories in their work with children. In addition, students will become more knowledgeable on the topic of attachment and Theraplay. (1-3)

**773. APPLICATION OF PLAY THERAPY IN SCHOOLS.** This course will provide a basis for the use of play therapy in schools. Assessment, treatment, and interventions with children and their families will be reviewed from a play therapy perspective. (1-3)

**774. APPLICATION OF PLAY THERAPY IN MH.** This course will provide a basis for the use of play therapy in a mental health setting. Assessment, treatment, and interventions with children and their families will be reviewed from a play therapy perspective. (1-3)

**775. PSYCHOPHARMACOLOGY IN PLAY THERAPY.** This course is designed to acquaint students with the fundamentals of psychotropic medications. Basics of pharmacology, adverse effects, indications, and drug interactions will be discussed in regards to their positive and negative impact on play therapy. Boundaries of practice and practical issues of assessment and referral will be covered. (1-3)

**776. PLAY THERAPY SUPERVISION.** This course is designed to provide students with theoretical and practical knowledge of clinical supervision models, methods, and issues. The course will explore supervisory roles, evaluation methods, research, legal and ethical issues, and socio-cultural issues in supervision. (1-3)

**777. PLAY THERAPY IN THE COURTROOM.** This course provides an overview of ethical and legal issues in play therapy related to child abuse and the play therapist, play therapy as a science in the courtroom, and play therapy testimony in court. (1-3)

**778. PLAY THERAPY WITH OLDER ADULTS.** This course gives an overview of how to utilize Play Therapy with older adults. This course will provide information regarding the use of play therapy with adults in both individual sessions and group counseling settings. Basic principles are reviewed, then the implementation and synthesis of Expressive Arts Therapies in a clinical setting with older adults will be major focus. (1-3)

**779. CHILD-PARENT RELATIONSHIP THERAPY.** This course is an overview of parent-child relationship therapy as well as teacher-child relationship therapy. A review of methods used in relationship play therapy and research findings in relationship play therapy along with multicultural issues are presented. (1-3)

**780. PLAY THERAPY PRACTICUM.** This course provides supervised experience in play therapy with application of theory, principles, techniques, and strategies acquired in previous course work and clinical experiences. Skills acquisition and demonstration of competencies. Two semesters (a total of 6 credit hours) of Coun 789 are required to obtain 34 hours of supervision by RPT-S. (1-3)

**784. ADVANCED COUNSELING THEORY.** Specialized approaches to counseling/psychotherapy. Marriage and family and other specific applications. (3)

**793. ADVANCED PRACTICUM.** Supervised counseling with case study and use of advanced approaches. Application must be submitted and approved during the preceding semester; for Coun majors only. Z grade. (1-9)

**794. ADVANCED GROUP COUNSELING.** Advanced group counseling and therapy and techniques. Includes topical seminars, supervision of group leadership and development of personal leadership style. (3)

**795. INTERNSHIP.** Doctoral-level, full-time supervised counseling internship at an approved site. Z grade. (3-18)

**797. DISSERTATION.** Z grade. (1-18)

#### **Adult Education-Edae**

**635. LIFELONG LEARNING.** The development, nature, philosophy, agencies, methods, programs and problems, of lifelong learning in America. (3)

**636. THE ADULT LEARNER.** An examination of the adult learner and the major problems faced; emphasis on factors that affect learning ability, achievement, and motivation to learn through the adult years. (3)

**637. METHODOLOGY IN ADULT EDUCATION.** Current thinking and practice in the field of adult education methodology. (3)

#### **Foundations of Education-Edfd**

**507. CONT. ISSUES IN AMERICAN EDUCATION.** Significant current questions under discussion in American education. (3)

**521. RECENT DEVELOPMENTS IN EDUC. PRACTICE.** Investigation and evaluation of selected contemporary innovations in teaching and the conducting of educational programs. (3)

**603. ADVANCED EDUCATIONAL PSYCHOLOGY.** Applied psychology in the area of guidance; interests, attitudes, habits; school learning; special education; staff personnel; tests and measurements. (3)

**607. THE PROFESSIONAL PHILOSOPHY.** Relation of various philosophies to modern educational practice. (3)

**609. THE CULTURAL CONTEXT OF EDUCATION.** History and development of education with emphasis on cultural origins. (3)

**611. COMPARATIVE EDUCATION.** Comparisons among patterns of education currently followed in other countries. (3)

**613. EDUCATION AND SOCIAL INTERACTION.** Ways in which selected cultural factors and trends affect the process and organization of education. (3)

#### **Higher Education-Edhe**

**651. ADVANCED INDIVIDUAL STUDY.** Development of special projects under supervision. Z grade. Prerequisite: Instructor Approval Required. (1-6)

**656. STUDENT SERVICES IN HIGHER EDUCATION.** The development and organization of student personnel services in institutions of higher learning; the philosophy, methods, and techniques used in their operation. Prerequisite: Admission to a higher education program or permission of instructor. (3)

**657. COMPARATIVE HIGHER EDUCATION.** Introduce students to the various systems of international higher education. The historical and cultural foundations of international systems are examined, as well as salient issues such as funding models, governance structure, and student life. Course

requires international travel. The course is intended to introduce students to international systems of higher education and is designed to enable the student to identify, analyze, and synthesize key dimensions of such systems. This course involves a student abroad experience and may be repeated once for credit if travel is to a different country. (3)

**658. ORG/GOVERNANCE OF HIGHER ED.** Basic principles of organization and governance of community colleges, colleges and universities. Prerequisite: Admission to a higher education program or permission of instructor. (3)

**659. FINANCE OF HIGHER EDUCATION.** Financial aspects of the operation of community colleges, colleges and universities. Prerequisite: Admission to a higher education program or permission of instructor. (3)

**660. HISTORY OF HIGHER EDUCATION.** An introduction to the events that have shaped higher education in the United States. Prerequisite: Admission to a higher education program or permission of instructor. (3)

**661. THE COMMUNITY COLLEGE.** Unique role of the community college in American higher education. Prerequisite: Admission to a higher education program or permission of instructor. (3)

**662. COLLEGE TEACHING.** Instructional strategies common to all fields in higher education. (3)

**663. CURRICULUM IN HIGHER EDUCATION.** Background and development, aims, and problems. (3)

**664. THE LAW AND HIGHER EDUCATION.** Study of the legal issues that affect higher education. Prerequisite: Admission to a higher education program or permission of instructor. (3)

**665. CONTEMPORARY ISSUES OF HIGHER EDUCATION.** An examination of current issues in higher education across various subjects within the discipline. Prerequisite: Edhe 658 with minimum grade of C, Edhe 659 with minimum grade of C, Edhe 664 with minimum grade of C, Edhe 656 with minimum grade of C, Edhe 671 with minimum grade of C, Doctoral students must have advisor approval. (3)

**667. PRACTICUM IN STUDENT PERSONNEL SERVICES.** Supervised experience in a campus student personnel service. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Edhe 656 with minimum grade of C. (3)

**668. PRACTICUM IN STUDENT PERSONNEL SERVICES.** Supervised experience in a campus student personnel service. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Edhe 656 with minimum grade of C. (3)

**669. HUMAN RESOURCES IN HIGHER EDUCATION.** This graduate course is intended to immerse students into the various legal regulations and policies in place that regulate human resources administration at the university level. Prerequisite: Admission to a higher education program or permission of instructor. (3)

**670. TOPICS IN HIGHER EDUCATION.** A graduate seminar course presented in a topical format to address areas of interest to student personnel master's students, student affairs professionals and higher education administration doctoral students. May be repeated for credit. (3)

**671. THE COLLEGE AND THE STUDENT.** The college student's needs, identity, potential, choices, and characteristics. Prerequisite: Admission to a higher education program or permission of instructor. (3)

**760. ADVANCED EDUCATION POLICY ANALYSIS.** Advanced study of educational policy making at the state and federal level. The class requires travel to Jackson, Mississippi, and Washington, D.C. (3)

**797. DISSERTATION.** Z grade. (1-18)

#### **Educational Leadership-Edld**

**500. PERSPECTIVES ON EDUCATIONAL ADMIN.** Organization and structure of American education at the national, state, and local levels. (3)

**501. THE EFFECTIVE PRINCIPAL.** The principal as an instructional leader and unit manager. (3)

**504. INSTRUCTIONAL IMPROVEMENT.** Promoting teacher improvement through clinical supervision and awareness of the elements of effective teaching. (3)

**505. SCHOOL LAW SEMINAR.** Instruction in and discussion of current legal problems confronting school administrators. Z grade. (3)

**600. SPECIAL TOPICS IN EDUCATIONAL LEADERSHIP.** A graduate seminar course presented in a topical format to address areas of interest to master's, specialist, and doctoral students in educational leadership. May be repeated for credit. (3-6)

**623. FISCAL MANAGEMENT IN SCHOOLS.** Principles of fiscal support at local, state, and federal levels; budget preparation; and distribution and management of funds. (3)

**630. ORGANIZATION-ENVIRONMENT INTERACTION.** An examination of the relationships between educational institutions and their surrounding environment. (3)

**631. FACILITY PLANNING AND MANAGEMENT.** Determining community and district facility needs; planning new and renovated buildings; and maintenance and operation of facilities. (3)

**641. LAW AND ETHICS OF EDUCATION.** Ethical and legal principles for school leadership including state and federal decisions affecting public and private education; emphasis on constitutional considerations. (3)

**642. MANAGING OPERATIONS FOR LEARNING.** The management knowledge, skills, and dispositions necessary to improve teaching and learning by effectively and efficiently organizing resources, processes, and systems. (3)

**643. HUMAN RESOURCE ADMINISTRATION.** Selection, preparation, certification; salaries; salary schedules, retirement, tenure, leaves of absence; professional organizations, ethics; participation in policy formulation. (3)

**651. ADVANCED INDIVIDUAL STUDY.** Development of special projects under supervision. (1-6)

**652. ADVANCED INDIVIDUAL STUDY.** Development of special projects under supervision. (1-6)

**656. ADMINISTRATIVE INTERNSHIP.** University-supervised field experiences under the direction of an approved educational administrator. Designed to promote appropriate application of academic course work and experiences. Z grade. (1-6)

**671. LEADING QUALITY INSTRUCTION.** Leadership theories, skills, and dispositions necessary to improve teaching and learning processes at the individual teacher or classroom level. (6)

**672. COMMON GROUND: SCHOOL AND COMMUNITY.** Emerging issues and trends in school administration; community conditions and dynamics, community resources, community relations, models for school-community partnerships. (6)

**673. ORGANIZATION AND MANAGEMENT.** School management and models of organizations; organizational development, school and district-level procedures, school safety and security, fiscal operation, school facilities, legal issues, technological support. (6)

**674. DEVELOPING QUALITY TEACHING.** The leadership knowledge, skills, and dispositions necessary to improve teaching and learning at the organizational level, by insuring that instructional personnel have what they need (material, organizational, operational, cultural) to maximize instructional performance. (6)

**675. POL, INT, ETH, LEG, POL. ISSUES.** Public education in a democratic society; political, cultural and economic systems; diversity, equity and ethical issues. (6)

**676. LEADING CHANGE IN EDUCATIONAL ORG.** The leadership knowledge, skills, and dispositions necessary to improve teaching and learning by driving and sustaining organizational change in an collegial environment. (6)

**692. PROPOSAL WRTG/GRANTS.** An examination of the elements that comprise a proposal, culminating in practice in proposal preparation. Integrated into the proposal writing process will be exploration into the many aspects of grantsmanship. (3)

**693. STATEWIDE CONTROL/COOR IN HIGHER ED.** An examination of the varied methods of governing higher education activities; i.e., boards of trustees, coordinating councils, boards of regents, and state commissions. Included also is an examination of the various philosophies and organizational structures that influence decisions inherent in the governance process. (3)

- 694. HUMAN RESOURCE DEVELOPMENT.** Leader's role in developing the human resources of an organization. (3)
- 697. THESIS.** No grade. (1-12)
- 700. ADMINISTRATIVE THEORY.** Presentation of theories and processes in administrative positions in educational institutions; examination of the research. (3)
- 721. LEADERSHIP AND MANAGEMENT.** Personal assessment and development of leadership and management competencies for educators. (3)
- 727. INTERNSHIP IN ADMIN. & HIGHER EDUCATION.** Z grade. (3-6)
- 730. MULTIDISCIPLINARY PERSP ON LEADERSHIP.** A seminar drawing from a variety of disciplines to broaden doctoral students' behavioral and social-scientific and humanistic backgrounds as these can enrich leadership practices. (3)
- 750. ORGANIZATIONAL IMPROVEMENT.** A study of organizational, cultural, and strategic elements in improving the performance of educational organizations. (3)
- 756. INTERNSHIP IN EDUCATIONAL ADMINISTRATION.** Service in an administrative position under supervision. Z grade. (3-6)
- 767. FIELD STUDY.** Original study of an actual administrative problem in a school; report of thesis proportions and style. Z grade. (3-6)
- 797. DISSERTATION.** Z grade. (1-18)

#### **Field and Laboratory Experience-Edle**

- 655. SUPER. FOR HOME ECON. TEACHERS.** Principles and techniques of supervising student teachers and teachers in service. (3)

#### **Educational Research-Edrs**

- 501. EDUCATIONAL STATISTICS I.** An introduction to descriptive and inferential statistical techniques with a particular emphasis on conceptual, computational, and computer applications. (3)
- 557. COMPUTERS AND EDUCATION.** An introduction to computer technology; concepts and methods in educational applications; computer impacts on education. (3)
- 605. EDUCATIONAL RESEARCH I.** An overview of research methods used to investigate educational and psychological phenomena. (3)
- 673. DATA LED CURRICULUM AND ASSESSMENT.** The leadership knowledge, skills and dispositions necessary to improve teaching and learning by leading data-based decision making. This includes research methods, quantitative and qualitative data, assessments of teachers and students, and data analysis. (6)
- 700. MODELS OF INQUIRY AND LITERATURE REVIEW.** A seminar focused on the development of an appropriate dissertation topic and corresponding extensive literature review. Prerequisite: Edrs 501 with minimum grade of C, Edrs 605 with minimum grade of C. (3)
- 701. EDUCATIONAL STATISTICS II.** An in-depth study of the analysis of variance process using traditional and regression-based techniques. Conceptual, computational, and computer applications are emphasized. Prerequisite: Edrs 501 with minimum grade of C. (3)
- 702. INSTIT RESEARCH & PLANNING IN HIGHER EDU.** Outlines the development of institutional research at colleges and universities; reviews common institutional research functions; provides practical exercises in the conduct of studies, data presentation and analysis; describes the development of structured planning processes at colleges and universities. (3)
- 704. FOUN. OF QUALITATIVE RESEARCH METHOD.** An in-depth analysis of the various forms of qualitative research. It is intended that this course will provide students with a theoretical and practical starting point for utilizing this method of research. Prerequisite: Edrs 501 with minimum grade of C, Edrs 605 with minimum grade of C. (3)

**705. EDUCATIONAL RESEARCH II.** An in-depth study of specific research methods used to investigate educational and psychological phenomena. Prerequisite: Edrs 501 with minimum grade of C, Edrs 605 with minimum grade of C, Edrs 701 with minimum grade of C. (3)

**710. DESIGN OF EXPERIMENTS.** Theory and methods in the planning and statistical analysis of experimental studies. Prerequisite requirements for this course may also be satisfied by equivalent course work as approved by the department and by consent of instructor. Prerequisite: Edrs 701 with minimum grade of C. (3)



## School of Engineering

Alexander Cheng, dean

227 Brevard Hall

662-915-7407

[http://www.olemiss.edu/depts/engineering\\_school/](http://www.olemiss.edu/depts/engineering_school/)

Overview: The School of Engineering offers a Master of Science (M.S.) and a Doctor of Philosophy (Ph.D.) in engineering science. These graduate degrees can be completed with any of the following emphasis areas: aeroacoustics, chemical engineering, civil engineering, computational hydroscience, computer science, electrical engineering, electromagnetics, environmental engineering, geology, geological engineering, hydrology, mechanical engineering, material science and engineering, and telecommunications.

Preliminary Requirements: Entrance requirements are those of the Graduate School. Applicants are expected to possess or be in the process of completing an undergraduate degree in engineering or closely related field from an accredited institution.

### **M.S. in Engineering Science**

Description: The M.S. in engineering science is offered in a number of emphasis areas: aeroacoustics, chemical engineering, civil engineering, computational hydroscience, computer science, electrical engineering, electromagnetics, environmental engineering, geology, geological engineering, hydrology, mechanical engineering, material science and engineering, and telecommunications.

Course Requirements: A student must complete the requirements for an emphasis area. For most emphasis areas, the degree may be completed as either a thesis option (30-hour program, to include 6 hours of thesis) or nonthesis option (30-hour program, to include a minimum of 3 hours of a design-oriented project course).

### **M.S., Emphasis in Aeroacoustics**

Description: A degree of M.S. in engineering science with emphasis in aeroacoustics prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, public service, or for doctoral work.

Course Requirements: For the emphasis in aeroacoustics, thesis and nonthesis options are available. Both options require as a minimum 30 semester hours of graduate credit (to include 6 hours of math-related courses) in which the student's adviser must approve all course selections. Under the thesis option, the minimum of 30 graduate credits shall consist of 24 hours of graded course work and 6 thesis hours. The nonthesis option requires as a minimum 30 hours of graded course work.

Other Academic Requirements: For both the thesis and nonthesis options, a candidate must pass a final oral examination.

### **M.S., Emphasis in Chemical Engineering**

Description: A degree of M.S. in engineering science with an emphasis in chemical engineering prepares graduates to apply chemical engineering science (transport phenomena, thermodynamics, chemical reaction engineering, and applied mathematics). It enables them to independently execute complex projects and

pursue successful careers in engineering, medicine, law, professional education, public policy, the military, management, and sales.

Course Requirements: The M.S. with emphasis in chemical engineering requires the following graduate-level courses: Advanced Transport Phenomena I, II (Ch E 560, 561); Thermodynamics of Chemical Systems (Engr 665); and Chemical Reaction and Reactor Analysis I (Engr 669); 6 hours of thesis. The student also must take three semesters (1 hour each) of the Research Seminar (Ch E 515).

Other Academic Requirements:

Candidates must

1. Prepare and orally defend a thesis;
2. Maintain an overall 3.0 GPA in the Ch E core courses;
3. Adhere to an adviser/committee approved course plan.
4. Maintain satisfactory progress in course work and research as assessed by their committee.

### **M.S., Emphasis in Civil Engineering**

Description: A degree of M.S. in engineering science with emphasis in civil engineering prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, public service, or for doctoral work. The program offers a choice of several concentration areas: structures, geotechnical engineering, construction materials, water resource engineering, environmental engineering, transportation systems, infrastructure asset management, mechanics of materials and earthquake and disaster response management.

Goals/Mission Statement: The program will provide high quality graduate education in a range of civil engineering disciplines and will produce research and scholarship that is nationally recognized and supports the economic development of the state, the region, and the nation.

Course Requirements: The thesis option for the M.S. with emphasis in civil engineering requires at least 24 hours of course work and at least 6 hours of thesis credit (Engr 697-Thesis) with a thesis defense. The nonthesis option requires 27 hours of course work and a 3-hour project or research course (Engr 699-Special Projects in Engineering Science or Engr 693-Research Topics in Engineering Science) with a written report and oral presentation.

Required graduate course work for either option includes at least one course in mathematics (e.g., Engr 591-Engineering Analysis I, Math 555-Advanced Calculus I, Math 556-Advanced Calculus II, Math 575-Mathematical Statistics I); one course in numerical method (e.g., Engr 590-Finite Element Analysis); and one course in mechanics (e.g., Engr 617-Continuum Mechanics). Other graduate course work must be approved by the student's adviser.

Other Academic Requirements: For either option, a candidate must pass a final oral examination.

### **M.S., Emphasis in Computational Hydrosience and Engineering**

Description: An M.S. in engineering science with an emphasis in computational hydrosience and engineering prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, public service, or for doctoral work.

Course Requirements: The M.S. with emphasis in computational hydroscience and engineering can be completed as either a thesis or nonthesis option.

The thesis option entails 24 credit hours of course work (plus at least 6 thesis hours), including 12 hours of core courses in numerical methods, fluid dynamics, transport phenomena, and hydrosciences, and 12 hours of approved electives.

The nonthesis option includes an additional 3 hours of approved electives, as well as completion of a research project and report. Both options require the publication of a technical paper in either a journal or a conference proceeding; attendance and presentation at research seminars; and passing the comprehensive oral exam.

Other Academic Requirements: For either option, a candidate must pass a final oral examination.

### **M.S., Emphasis in Computer Science**

Description: An M.S. in engineering science with emphasis in computer science prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, public service, or for doctoral work.

Course Requirements: The M.S. with emphasis in computer science requires that a student satisfy the departmental distribution requirement by selecting courses in the areas of applications, systems, and theory (two courses from one area and at least one course from each of the other two areas). Lists of the currently available courses falling into these three distribution areas are available from the Department of Computer and Information Science. Also required are a minimum of 9 semester hours from computer science courses at the 600 level.

Students may choose to complete the degree with either a thesis or nonthesis option. For the thesis option, no more than 6 credit hours may be earned from thesis hours (Engr 697). For the nonthesis option, 3 semester hours must be earned from an independent study research project (Engr 693); the student must complete a written project paper and pass an oral examination on the work in the project area.

Other Academic Requirements: For either option, a candidate must pass a final oral examination.

### **M.S., Emphasis in Electrical Engineering**

Description: An M.S. in engineering science with emphasis in electrical engineering prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, public service, or for doctoral work.

Course Requirements: The M.S. with emphasis in electrical engineering can be completed as either a thesis or nonthesis option.

The thesis option requires at least 24 hours of course work and at least 6 hours of thesis credit. Of the 24 hours of course work, 3 to 6 hours can be in an approved minor area, at least 1 hour must be in seminar, and no more than 3 hours can come from research credit outside the thesis.

The nonthesis option requires 27 hours of course work and a 3-hour project or research course with a written report, final oral presentation, and final oral exam. Course work for either option must be approved by the student's advisory committee.

Other Academic Requirements: For either option, a candidate must pass a final oral examination.

**M.S., Emphasis in Electromagnetics**

Description: An M.S. in engineering science with emphasis in electromagnetics prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, public service, or for doctoral work.

Course Requirements: The M.S. with emphasis in electromagnetics can be taken as a thesis or nonthesis option. Either option requires 13 semester hours of core courses in electromagnetics theory and applications:

Numerical Methods in Electromagnetics (Engr 626);  
Advanced Electrodynamics (Engr 621);  
Advanced Microwave Measurements (Engr 619);  
Passive Microwave Circuits (Engr 623); and  
Seminar (Engr 695).

Also required are 5 semester hours in specific areas of electromagnetics, including microwave circuits, antennas, electromagnetics, and computational electromagnetics courses (from among Engr 590, Engr 593, Engr 622, Engr 624, Engr 625, Engr 627, Engr 628, Engr 687, Engr 691, Engr 693 (no more than 2 semester hours), and Engr 699).

For the thesis option, the student must complete 6 hours of electives, including 3 to 6 hours in a minor field. The thesis candidate must take at least 6 hours of thesis.

For the nonthesis option, the student also must complete 9 hours of electives, including 3 to 6 hours as a minor from mathematics, physics, or another area with approval, and technical electives from the areas listed above. The nonthesis candidate also must complete a 3-hour project or research course with written report and oral presentations, and a final oral exam.

Other Academic Requirements: For either option, a candidate must pass a final oral examination.

**M.S., Emphasis in Environmental Engineering**

Description: An M.S. in engineering science with emphasis in environmental engineering prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, public service, or for doctoral work. Students can concentrate in any of the following specialty areas: water resources, watershed systems, hydrology, surface water quality, stormwater, drinking water treatment, wastewater, solid waste, air pollution, groundwater modeling and remediation, and remote sensing and geospatial technologies. Students entering the program come from a variety of engineering and nonengineering disciplines, such as geology, chemistry, biology, and mathematics.

Goals/Mission Statement: The program will provide high quality graduate education in a range of environmental disciplines and will produce research and scholarship that is nationally recognized and supports the economic development of the state, the region, and the nation.

Course Requirements: The M.S. with emphasis in environmental engineering can be completed as either a thesis or nonthesis option. The thesis option requires at least 24 hours of course work and at least 6 hours of thesis credit (Engr 697-Thesis) with a thesis defense. The nonthesis option requires 27 hours of course work and a 3-hour project or research course (Engr 699-Special Projects in Engineering Science or Engr 693-Research Topics in Engineering Science) with a written report and oral presentation.

The graduate course work for either option must include at least one course in mathematics (e.g., Engr 591-Engineering Analysis I, Math 555-Advanced Calculus I, Math 556-Advanced Calculus II, Math 575-Mathematical Statistics I), one course in numerical method (e.g., Engr 590-Finite Element Analysis), and one course in mechanics (e.g., Engr 617-Continuum Mechanics). Other graduate course work must be approved by the student's adviser.

Other Academic Requirements: For either option, a candidate must pass a final oral examination.

#### **M.S., Emphasis in Geological Engineering**

Description: An M.S. in engineering science with emphasis in geological engineering prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, public service, or for doctoral work.

Course Requirements: The M.S. with emphasis in geological engineering requires the completion of a thesis. All course selections for both the thesis and nonthesis options must be approved by the student's advisory committee. A minimum of 6 semester hours of thesis credit is required.

Other Academic Requirements: The candidate must pass a final oral examination.

#### **M.S., Emphasis in Geology**

Description: An M.S. in engineering science with emphasis in geology prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, research and development, public service, or for doctoral work.

Course Requirements: The M.S. with emphasis in geology requires the completion of a thesis. All course selections for both the thesis and nonthesis options must be approved by the student's advisory committee. A minimum of 6 semester hours of thesis credit is required. The nonthesis option requires the successful completion of an applied project approved by the student's committee.

Other Academic Requirements: The candidate must pass a final oral examination.

#### **M.S., Emphasis in Hydrology**

Description: An M.S. in engineering science with emphasis in hydrology prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, research and development, public service, or for doctoral work.

Course Requirements: For the M.S. with emphasis in hydrology, a student must complete 24 semester hours of course work plus 6 hours of thesis. The 24 hours of course work includes 13 hours of required courses [Hydrogeology (Geol 505), Environmental Geochemistry (G E 503), Groundwater Mechanics (Engr 636), and Contaminant Transport (Engr 645)], 6 hours from an approved list of electives (G E 518, C E 541, C E 542, C E 543, Ch E 545, Geol 615, Engr 537, Engr 616, Engr 637, Engr 648), and an additional 5 hours as approved by the student's committee. Up to 3 hours of Engr 695 (seminar) may be used as part of the required hours provided that the seminar schedule includes critiqued presentations by the enrolled students.

Other Academic Requirements: A candidate must prepare and orally defend a thesis.

**M.S., Emphasis in Materials Science and Engineering**

Description: An M.S. in engineering science with emphasis in materials science and engineering prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, public service, or for doctoral work.

Course Requirements: The M.S. with emphasis in materials science and engineering can be completed as either a thesis or nonthesis option. The thesis option requires a minimum of 24 hours of course work as specified and approved by the student's adviser and 6 hours minimum of thesis credit. A nonthesis "project option" entails 27 hours of approved course work and 3 hours of a research project, plus a written report on the project and a comprehensive oral exam covering the project and all course work.

Other Academic Requirements: For either option, a candidate must pass a final oral examination.

**M.S., Emphasis in Mechanical Engineering**

Description: An M.S. in engineering science with emphasis in mechanical engineering prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, public service, or for doctoral work.

Course Requirements: The M.S. with emphasis in mechanical engineering can be completed as a thesis or nonthesis option. The thesis option requires a minimum of 24 hours of course work as specified by the student's adviser and 6 hours minimum of thesis credit. A nonthesis "project option" entails 27 hours of approved course work plus 3 hours of a research project, plus a written report on the project and a comprehensive oral exam covering the project and all course work. A third, nonthesis option includes 30 hours of approved course work and a comprehensive oral exam.

Other Academic Requirements: For each option, a candidate must pass a final oral examination.

**M.S., Emphasis in Telecommunications**

Description: An M.S. in engineering science with emphasis in telecommunications prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, public service, or for doctoral work.

Course Requirements: The M.S. with emphasis in telecommunications must be completed as a thesis option only. In addition to 6 hours of thesis, 24 hours of course work is required. This typically will include courses in wireless communications, digital communications, communications networking, probabilistic modeling, telecommunications policy, and management information systems. Course work must be approved by the program director.

Other Academic Requirements: A candidate must prepare and orally defend a thesis.

**Ph.D. in Engineering Science**

Description: The Ph.D. in engineering science is offered in a number of emphasis areas: aeroacoustics, chemical engineering, civil engineering, computational hydroscience, computer science, electrical engineering, electromagnetics, environmental engineering, geology, geological engineering, hydrology, mechanical engineering, and material science and engineering.

Course Requirements: A student must complete the requirements for one of the emphasis areas. All doctoral programs require completion of a comprehensive examination, dissertation prospectus, and a dissertation. See the department chair or adviser for specific requirements for an emphasis area.

### **Ph.D., Emphasis in Aeroacoustics**

Description: A Ph.D. in engineering science with emphasis in aeroacoustics prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, or public/government service. Students entering the program come from a variety of engineering and nonengineering disciplines such as physics.

Course Requirements: The Ph.D. with emphasis in aeroacoustics requires a minimum 66 semester hours of graduate credit beyond the baccalaureate degree. The student's adviser must approve all course selections.

Other Academic Requirements: At the adviser's discretion, a preliminary examination may be required at or near the beginning of the student's work beyond the master's degree. A comprehensive written examination must be passed before entering the dissertation process.

### **Ph.D., Emphasis in Chemical Engineering**

Description: A Ph.D. in engineering science with emphasis in chemical engineering prepares graduates to apply chemical engineering science (transport phenomena, thermodynamics, chemical reaction engineering, and applied mathematics). It enables them to independently execute complex projects and pursue successful careers in engineering, medicine, law, professional education, public policy, the military, management, and sales. It further equips them with the experience to conduct research—generating and disseminating new knowledge.

Course Requirements: The Ph.D. with an emphasis in chemical engineering requires no specific courses beyond those specified for the M.S. degree. A total of 90 credit hours are required, and specific course work is stipulated by the candidate's advisory committee. Each student is required to conduct a semester-long investigation of a research or design problem in an area other than his or her dissertation area.

Other Academic Requirements:

Candidates must

1. Achieve a 3.5 GPA in four committee-approved courses (nominally satisfying graduate-level core; see M.S. Ch E Emphasis);
2. Prepare and defend a proposal on an original proposition unrelated to their dissertation research;
3. Prepare and present a prospectus for their dissertation research;
4. Prepare and orally defend a dissertation;
5. Adhere to an adviser/committee-approved course plan;
6. Maintain satisfactory progress in course work and research as assessed by their committee.

### **Ph.D., Emphasis in Civil Engineering**

Description: A Ph.D. in engineering science with emphasis in civil engineering prepares a student with advanced technical knowledge and communication skills for pursuing a career in engineering research and development, education, industry, or public service. The program offers a choice of several concentration areas: structures, geotechnical engineering, construction materials, water resource engineering, environmental engineering, transportation systems, infrastructure asset management, mechanics of materials, and earthquake and disaster response management.

Goals/Mission Statement: The program will provide high quality graduate education in a range of civil engineering disciplines and will produce research and scholarship that is nationally recognized and supports the economic development of the state, the region, and the nation.

Course Requirements: The Ph.D. degree with emphasis in civil engineering requires 24 hours of course work beyond the M.S. degree or 48 hours beyond the B.S. degree, and 18 hours of dissertation credit. At least two courses need to be in mathematics (e.g., Engr 591-Engineering Analysis I, Engr 592-Engineering Analysis II, Math 555-Advanced Calculus I, Math 556-Advanced Calculus II, Math 575-Mathematical Statistics I), one course in numerical method (e.g., Engr 590-Finite Element Analysis), and one course in mechanics (e.g., Engr 617-Continuum Mechanics). Other graduate course work must be approved by the student's advisory committee.

Other Academic Requirements: A qualifying examination, comprehensive examination, dissertation prospectus, and dissertation defense are needed. Before admission to candidacy, the student must pass written and oral comprehensive exams.

### **Ph.D., Emphasis in Computational Hydroscience and Engineering**

Description: A Ph.D. in engineering science with emphasis in computational hydroscience and engineering prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, or public/government service. Students entering the program come from a variety of engineering and nonengineering disciplines such as civil and mechanical engineering and physics.

Course Requirements: The Ph.D. in engineering science with an emphasis in computational hydroscience and engineering involves 48 credit hours of course work, including core courses and electives, 12 hours of research topics, and 18 dissertation hours. Students may specialize in either hydroscience/engineering system modeling or computational methodologies applicable to hydro-systems modeling.

Other Academic Requirements: Other requirements include publishing at least two refereed papers (preferably one of them to be published in a professional journal); participating in research seminars; completing assigned research projects; and passing written and oral comprehensive exams.

### **Ph.D., Emphasis in Computer Science**

Description: A Ph.D. in engineering science with emphasis in computer science prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, research and development, or public/government service. Students entering the program come from a variety of engineering and nonengineering disciplines such as computer science, electrical engineering, physics, biology, and the liberal arts.

Course Requirements: For the Ph.D. in engineering science with an emphasis in computer science, the student must present a master's degree in the field or the equivalent and take additional classes adding up to 54 hours of course work beyond the bachelor's degree. This may include no course numbered lower than Csci 510, and a minimum of 18 hours must be in computer science courses at the 600 level. The student may count up to three nonregular courses (9 hours), such as independent study, towards the degree.

Other Academic Requirements: The student must pass four written comprehensive exams: one each in systems, languages, and algorithms, and one selected from the following: artificial intelligence, graphics and visualization, data management and information retrieval, software engineering, or another area approved by petition to the graduate committee.



**Ph.D., Emphasis in Electrical Engineering**

Description: A Ph.D. in engineering science with emphasis in electrical engineering prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, or public/government service. Students entering the program come from a variety of engineering and nonengineering disciplines such as physics and computer science.

Course Requirements: The Ph.D. with an emphasis in electrical engineering requires at least 48 hours of course work and at least 18 hours of dissertation credit. Of the 48 hours of course work, 12 hours must be in an approved minor area, at least 2 hours must be in seminar, and no more than 6 hours can come from research credit outside the dissertation. Course work must be approved by the student's advisory committee.

Other Academic Requirements: A written comprehensive exam is taken during the first year of residency.

**Ph.D., Emphasis in Electromagnetics**

Description: A Ph.D. in engineering science with emphasis in electromagnetics prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, or public/government service. Students entering the program come from a variety of engineering and nonengineering disciplines such as physics and mathematics.

Course Requirements: The Ph.D. with an emphasis in electromagnetics requires 36 semester hours in the major field out of a required total of 48 semester hours of graded course work beyond the bachelor's degree. Included in these requirements are the following core courses: Advanced Electrodynamics (Engr 621); Passive Microwave Circuits (Engr 623); Advanced Microwave Measurements (Engr 619); Numerical Methods in Electromagnetics (Engr 626); Antennas (Engr 625); and Seminar (Engr 695). Other courses are to be taken in specific areas of electromagnetics, including microwave circuits, antennas, electromagnetics, and computational electromagnetics. These related courses include Engr 590, Engr 593, Engr 622, Engr 624, Engr 625, Engr 627, Engr 628, Engr 655, Engr 687, Engr 691, Engr 693 (no more than 2 semester hours), Engr 699, Engr 729, or other courses with approval. The candidate must take 12 semester hours of graded courses in a minor area (mathematics, physics, or another appropriate field with approval).

Other Academic Requirements: A written comprehensive exam is taken during the first year of residency.

**Ph.D., Emphasis in Environmental Engineering**

Description: A Ph.D. in engineering science with emphasis in environmental engineering prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, or public service. Depending on their career focus, students can concentrate in any of the following specialty areas: water resources, watershed systems, hydrology, surface water quality, stormwater, wastewater, drinking water treatment, solid waste, air pollution, groundwater modeling and remediation, and remote sensing and geospatial technologies. Students entering the program come from a variety of engineering and nonengineering disciplines, such as geology, chemistry, biology, and mathematics.

Goals/Mission Statement: The program will provide high quality graduate education in a range of environmental engineering disciplines and will produce research and scholarship that is nationally recognized and supports the economic development of the state, the region, and the nation.

Course Requirements: The Ph.D. with emphasis in environmental engineering requires 24 hours of course work beyond a master's degree or 48 hours beyond a bachelor's degree, and 18 hours of dissertation credit. At least two courses must be in mathematics (e.g., Engr 591-Engineering Analysis I, Engr 592-Engineering

Analysis II, Math 555-Advanced Calculus I, Math 556-Advanced Calculus II, Math 575-Mathematical Statistics I), one course must be in numerical method (e.g., Engr 590-Finite Element Analysis), and one course must be in mechanics (e.g., Engr 617-Continuum Mechanics). Other graduate course work must be approved by the student's advisory committee.

Other Academic Requirements: Completion of a qualifying examination, a comprehensive examination, a dissertation prospectus, and a dissertation defense is required. Before admission to candidacy, the student must pass written and oral comprehensive exams.

#### **Ph.D., Emphasis in Geological Engineering**

Description: A Ph.D. in engineering science with emphasis in geological engineering prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, or public/government service. Students entering the program come from a variety of engineering and nonengineering disciplines such as geology and physics.

Course Requirements: The Ph.D. with an emphasis in geological engineering requires 54 semester hours of graduate credit beyond the bachelor's degree; selection of courses must be approved by the student's advisory committee.

Other Academic Requirements: Successful completion of both written and oral comprehensive exams is required before undertaking the dissertation.

#### **Ph.D., Emphasis in Geology**

Description: A Ph.D. in engineering science with emphasis in geology prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, research and development, or public/government service. Students entering the program come from a variety of engineering and nonengineering disciplines such as geological engineering and physics.

Course Requirements: The Ph.D. with an emphasis in geology requires 54 semester hours of graduate credit beyond the bachelor's degree; selection of courses must be approved by the student's advisory committee.

Other Academic Requirements: Successful completion of both written and oral comprehensive exams is required before undertaking the dissertation.

#### **Ph.D., Emphasis in Hydrology**

Description: A Ph.D. in engineering science with emphasis in hydrology prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, research and development, or public/government service. Students entering the program come from a variety of engineering and nonengineering disciplines such as geology and civil engineering.

Course Requirements: For the Ph.D. with emphasis in hydrology, a student must complete 48 semester hours of course work beyond the bachelor's degree plus 18 hours of dissertation. The 48 hours of course work must include 13 hours of required courses [Hydrogeology (Geol 505), Environmental Geochemistry (G E 503), Groundwater Mechanics (Engr 636), and Contaminant Transport (Engr 645)], and 6 hours from an approved list of electives (G E 518, C E 541, C E 542, C E 543, Ch E 545, Geol 615, Engr 537, Engr 616, Engr 637, Engr 648). Remaining credit hours will be fulfilled with courses approved by the student's committee. Up to 3 hours of Engr 695 (seminar) may be used as part of the required hours provided that the seminar schedule includes critiqued presentations by the enrolled students.

Other Academic Requirements: Students must pass a written and oral comprehensive exam before completing the dissertation research.

#### **Ph.D., Emphasis in Materials Science and Engineering**

Description: A Ph.D. in engineering science with emphasis in materials science and engineering prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, or public/government service. Students entering the program come from a variety of engineering and nonengineering disciplines such as physics or chemistry.

Course Requirements: The Ph.D. with an emphasis in materials science and engineering requires 30 semester hours of course work beyond the master's degree as specified and approved by the student's advisory committee, plus 12 hours of research and 18 dissertation hours.

Other Academic Requirements: Written and oral qualifying examinations, comprehensive examinations, a dissertation prospectus, and the dissertation defense are required. Before admission to candidacy, the student must pass the written and oral comprehensive exams.

#### **Ph.D., Emphasis in Mechanical Engineering**

Description: A Ph.D. in engineering science with emphasis in mechanical engineering prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, engineering research and development, academic institutions, or public/government service. Students entering the program come from a variety of engineering and nonengineering disciplines such as civil engineering and physics.

Course Requirements: The Ph.D. with an emphasis in mechanical engineering requires 30 semester hours of course work as specified by the student's advisory committee, plus 12 hours of research and 18 dissertation hours.

Other Academic Requirements: Comprehensive exams must be passed before entering the dissertation process.

### **Engineering-Engr**

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Professor Alexander Cheng, coordinator of Graduate Study

Graduate students with academic backgrounds in the traditional areas of engineering may have special interests in the following courses listed under engineering:

Aeroacoustics: 558, 585, 590, 591, 592, 601, 603, 604, 605, 606, 608, 609, 611, 612, 613, 617, 658, 671, 672, 679, 685, 711, 713, 715, 716, 720.

Chemical Engineering: 551, 553, 594, 601-608, 633-635, 651, 663, 665, 667, 669-670, 711-717.

Civil Engineering: 558, 572, 571, 573, 585, 590-594, 601, 603-604, 630-635, 638-640, 647, 649, 671-674, 685, 687, 690, 702, 706, 713-714.

Computer Science: 501-512, 514, 517-518, 520, 521, 618, 652-654, 656-657, 659-662, 664, 666.

Electrical Engineering: 559, 619-628, 687, 729.

Environmental Engineering: 515, 537, 540, 571, 573, 590-594.

Geological Engineering: 537, 572-573, 577, 579, 581-582, 600, 602, 614-615, 632, 638-644, 646, 651, 706, 749.

Materials Science and Engineering: 553, 558, 585, 590, 593, 594, 617, 642, 658, 671-679, 683, 684, 685, and ME 526, 530-540

Mechanical Engineering: 551, 553, 558-559, 561-562, 585, 601, 603-609, 611-613, 617, 631-632, 658, 663, 667, 671-674, 677-679, 683-684, 689, 702, 711-717, 720, 779.

Telecommunications: 610, 618, 629, 686, 688.

### **Cooperative Education-C OP**

**501. CO-OP WORK EXPERIENCE.** Similar to the 400 series, but with job assignments offering more challenge and responsibility for the advanced student. Z grade. Prerequisite: Consent of Department Chairperson Required. (3)

**502. CO-OP WORK EXPERIENCE.** Similar to the 400 series, but with job assignments offering more challenge and responsibility for the advanced student. Z grade. Prerequisite: Consent of Department Chairperson Required. (3)

**503. CO-OP WORK EXPERIENCE.** Similar to the 400 series, but with job assignments offering more challenge and responsibility for the advanced student. Z grade. Prerequisite: Consent of Department Chairperson Required. (3)

### **Engineering-Engr**

**501. FUNDAMENTALS OF COMPUTER SCIENCE.** Survey of fundamental topics in computer science including machine, assembler and high-level languages, design of assemblers, loaders, macro processors and compilers, operating system concepts, and other material essential for graduate work in computer science. (3)

**502. SOFTWARE SYSTEMS.** Survey of fundamental topics in computer science, including machine, assembler, and high-level languages, design of assemblers, loaders, macro processors and compilers, operating system concepts, and other material essential for graduate work in computer science. (3)

**515. ACOUSTICS.** Mathematical description of sound propagation with various boundary conditions. (Same as Phys 521). (3)

**537. ENVIRONMENTAL ENGINEERING II.** Ecology, toxicology, design of wastewater and water treatment systems, modeling of surface water, groundwater, and air quality. Prerequisite: C E 471 or Graduate Standing. (3)

**540. ENVIRONMENTAL ORGANIC TRANSPORT PHENOMEN.** Using chemical equilibria and transport to predict the fate of chemicals in the natural environment. Course goal: a comprehension of the underlying engineering science principles; thereby, fostering greater problem solving creativity. The course shows that the same principles that govern transport are used in the design of environmental treatment processes. Prerequisite: Chem 105. (3)

**551. ENGINEERING THERMODYNAMICS.** Advanced classical thermodynamics of systems of constant composition; emphasis on topics particularly useful to thermodynamic analysis in engineering. (3)

**553. HEAT TRANSFER.** Transient and multidimensional heat conduction, free and forced convection, thermal radiation; design of heat transfer systems; analytical and numerical methods. Prerequisite: (Engr 322 & Engr 420) or Graduate Standing. (3)

**555. FIELD TESTING & INSR. IN GEOTECH. ENGR.** Principles, mechanisms, and interpretation of traditional and modern field testing techniques; principles and applications of geotechnical instrumentation to monitor and measure the behavior of structures; geotechnical measurement with the engineering point of view. Prerequisite: C E 431. (3)

**558. VIBRATION ANALYSIS.** This course is intended to establish a systematic treatment of problems in the vibration of linear systems. Topics covered include systems with multiple degrees of freedom, properties of vibrating systems, vibration of continuous systems, and approximate numerical methods for finding natural frequencies. (3)

**559. ELEMENTS OF ROBOTICS.** This course will concentrate on the mechanical aspects of robotic manipulators, including manipulator kinematics, dynamics, and trajectory generation. This course will provide a thorough treatment of the fundamental skills underlying the use and mechanics of manipulators. (3)

**571. SERVICE LEARNING IN WATER TREATMENT.** This course combines academic material and service activities towards developing and/or testing community-based drinking water treatment systems. Topics include: world water issues; water quality standards; chemical and biological parameters; laboratory testing; pipe flow; drinking water unit processes; hands-on development and/or testing of a water treatment system; report writing; and professional presentations. (3)

**572. ADVANCED SANITARY ANALYSIS.** Introduction to advanced theoretical concepts in sanitary engineering with special emphasis on inorganic, organic, and physical chemistry. Prerequisite: C E 471 or Graduate Standing. (3)

**573. ENVIRONMENTAL REMEDIATION.** Characterization and remediation of contaminated soil, ground water, and surface water. Sources of contamination, regulations, health effects, sampling, monitoring, analysis and remediation technologies. Non-point source pollution and best management practices. Prerequisite: C E 471, C E 471 or Engr 322 or G E 450. (3)

**577. GEOPHYSICS I.** Gravity and magnetic theory and methods. (3)

**579. GEOPHYSICS II.** Seismic and electrical theory and methods of subsurface investigation. (Same as G E 579). (3)

**581. APPLICATIONS IN GEOPHYSICS.** Design and analysis of geophysical field problems. (4 lab hours). May be repeated for a maximum of 6 hours. (3)

**582. INTERDISCIPLINARY FIELD PROJECTS.** Interdisciplinary field projects for geologists, geological engineers, and civil engineers. For example, the course may cover waste management design or offshore drilling and sampling, or mineral recovery projects. (1-6)

**585. MECHANICS OF COMPOSITE MATERIALS I.** Development of constitutive laws governing the hygro-thermo-mechanical response of composite material systems. Micromechanical and macromechanical modeling, laminate theory, definition and comparison of failure criteria. Damage modeling and fatigue studies. Prerequisite: Engr 312 or Graduate Standing. (3)

**590. FINITE ELEMENT ANALYSIS I.** Introduction to the finite element method; formulation of linear BVP arising in engineering analysis; solution of model problems in 1D and 2D; shape functions and numerical integration; element formulations; applications in solid and fluid mechanics. Prerequisite: Math 353. (3)

**591. ENGINEERING ANALYSIS I.** Application of higher mathematics to engineering problems; special emphasis on the expression of engineering problems in mathematical terminology. Prerequisite: Math 353 or Graduate Standing. (3)

**592. ENGINEERING ANALYSIS II.** Application of higher mathematics to engineering problems; special emphasis on the expression of engineering problems in mathematical terminology. Prerequisite: Math 353 or Graduate Standing. (3)

**593. APPROXIMATE METHODS OF ENGR ANALYSIS I.** Application of approximate methods to solve boundary value and eigen-value problems; approximate analytical methods (series solutions); variational principles and numerical methods (finite difference, finite element, computer simulation). Prerequisite: Math 353 or Graduate Standing. (3)

**594. APPROXIMATE METHODS OF ENGR ANALYSIS II.** Application of approximate methods to solve boundary value and eigen-value problems; approximate analytical methods (series solutions); variational principles and numerical methods (finite difference, finite element, computer simulation). Prerequisite: Math 353 or Graduate Standing. (3)

**596. SPECIAL PROJECTS IN ENGINEERING SCIENCE.** Special topics course or investigation under the direction of Engineering faculty or staff member. May be repeated for credit. (1-3)

**597. SPECIAL PROJECTS IN ENGINEERING SCIENCE.** Special topics course or investigation under the direction of Engineering faculty or staff member. May be repeated for credit. Special. (1-3)

- 598. SPECIAL PROJECTS IN ENGINEERING SCIENCE.** Special topics course or investigation under the direction of Engineering faculty or staff member. May be repeated for credit. (1-3)
- 600. ADVANCED GEOCHEMISTRY.** Application of chemical principles to geological problems. (3)
- 601. COMPRESSIBLE FLOW.** General equations, one-dimensional gas dynamics; shocks and waves, two-dimensional flows, perturbation theory; similarity rules, effects of viscosity and conductivity. (3)
- 602. LITHOSTRATIGRAPHY.** Quantitative map and lithofacies analysis for the purpose of defining and evaluating depositional systems using surface and subsurface data. (3)
- 603. FLUID MECHANICS I.** Equations of motion, potential and stream function; complex variable application, conformal transformation; flow-past cylinders, Schwartz-Christofel transform, vortex motion. (3)
- 604. FLUID DYNAMICS II.** Navier-Stokes equation, viscous flow, boundary layer, laminar and turbulent flow, open channel flow, flow in porous media. (3)
- 605. CONVECTIVE HEAT AND MASS TRANSFER.** A study of heat and mass transfer by classical methods; includes laminar and turbulent flow, entrance region convection, variable fluid properties, aerodynamic heating, free convection. (3)
- 606. NUMERICAL HEAT TRANSFER AND FLUID FLOW.** Study of numerical methods for solving conduction, convection, and mass transfer problems, including numerical solution of Laplace's equation, Poisson's equation, Navier-Stokes equations, and the general equations of convection. (3)
- 607. STATISTICAL THERMODYNAMICS.** Thermodynamic properties of gases; introduction to quantum mechanics; distribution functions; partition functions, properties of real gases; problems in ionized gases. (3)
- 608. PHYSICAL GAS DYNAMICS.** Microscopic aspects of gas dynamics; elementary kinetic theory, development of Boltzmann equation, Chapman-Enskog development, collisional processes; transport properties. (3)
- 609. TIME SERIES ANALYSIS.** Study of random processes and methods for analyzing random signals. Topics include stationarity, ergodicity, correlation, coherence, continuous and digital spectral analysis, data sampling considerations, and filtering. (3)
- 610. DATA COMMUNICATIONS PROTOCOLS.** Introduction to modern protocols. Layering of communications processes including the OSI model, TCP/IP. Standard communications functions and how they are achieved under the framework of these protocols. Performance analysis and error control. (3)
- 611. AEROACOUSTICS.** Theory of aerodynamic sound generation; jet noise; boundary layer noise; turbo machinery noise; helicopter noise; sonic booms; atmospheric effects of propagation. (3)
- 612. AEROELASTICITY.** Study of structural deformations due to time-dependent fluid flow phenomena over surfaces; effects of gusts and turbulence; structural design criteria. Prerequisite: Engr 558. (3)
- 613. EXP METHOD IN AERODYNAMICS/AEROACOUSTICS** Principles of experimentation; intrusive/non-intrusive methods of measuring static and dynamic phenomena; jet and wind tunnel testing considerations; anechoic facility testing. Prerequisite: Engr 609. (3)
- 614. GEOMETRICS.** Map analysis of spatial geological data as applied to petroleum, coal, ore, and geotechnical exploration and evaluation. (Same as Geol 614). (3)
- 615. ANALYTICAL PETROLEUM GEOLOGY.** Analysis and design of petroleum exploration and production programs. (3)
- 616. ISOTOPE HYDROGEOLOGY.** Applications of stable and radioactive isotopes for solving environmental and low-temperature geologic problems. Problems that will be addressed include measurement techniques and limitations, tracing the origin of water and contaminants in natural systems, applications for global climate change and paleoclimates, quantifying infiltration and groundwater travel rates, and age dating of water. (3)
- 617. CONTINUUM MECHANICS.** Continuum hypothesis, forces and stress fields, displacement and strain fields, governing field laws, applications to fluid, solid and magnetofluid mechanics, electrodynamics, electro- and thermoviscoelasticity. (3)

**618. CODING FOR ERROR CODE.** This course provides a working knowledge of the use of codes to minimize error in the transmission of data using block and convolutional codes. (3)

**619. ADVANCED MICROWAVE MEASUREMENTS.** Modern microwave measurement techniques for passive and active microwave circuits, materials scatters and antennas. Prerequisite: Engr 621. (3)

**620. ADVANCED REMOTE SENSING.** Lecture and laboratory study of advanced topics in remote sensing, including classification and georeferencing. (3)

**621. ADVANCED ELECTRODYNAMICS.** Boundary-value problems. Green's functions, general transmission systems, coupled transmission systems, microwave optics, scattering. (3)

**622. ADVANCED ELECTROMAGNETIC THEORY.** Lectures on recent developments in electromagnetic theory. Prerequisite: Engr 621. (3)

**623. PASSIVE MICROWAVE CIRCUITS.** Guided electromagnetic waves, linear multiports, computer analysis and optimization of microwave circuits, multiconductor transmission lines, filters. (3)

**624. ACTIVE MICROWAVE CIRCUITS.** Microwave semiconductor sources, noise in linear circuits; microwave transistor amplifiers; parametric amplifiers; theory of nonlinear oscillators. Prerequisite: Engr 623. (3)

**625. ANTENNAS.** Aperture antennas, array synthesis, linear antennas, thin-wire antennas, traveling-wave antennas, frequency independent antennas; reciprocity principle and receiving antennas. Prerequisite: El E 525. (3)

**626. NUMERICAL METHODS IN ELECTROMAGNETICS.** Formulation and numerical solution of electromagnetic problems using current computational tools. (3)

**627. RAY METHODS IN ELECTROMAGNETICS.** Application of the Geometric Theory of Diffraction (GTD) to electromagnetic scattering problems, scattering from a half plane, reflection from planar and curved surfaces, diffraction from straight and curved edges and wedges. Prerequisite: Engr 621. (2-3)

**628. ADV NUMERICAL METHODS IN ELECTROMAGNETIC.** Advanced topics in the formulation and numerical solution of electromagnetic problems using current computational tools. Prerequisite: Engr 621, Engr 626. (3)

**629. TELEVISIONS SYSTEMS II.** Current practice and future development in TV, especially High Definition TV. Techniques of scanning, resolution, waveform design, and modulation, as well as regulatory aspects of television will be covered. Prospects of commercialization of HDTV will be discussed. (3)

**630. UNIT PROCESS & OPER IN ENV ENG I.** Theory and application of physical and chemical unit processes and operations available for the treatment of water and wastewater. (3)

**631. UNIT PROCESS & OPER IN ENV ENG II.** Theory and application of biological processes available for the treatment of wastewater. Prerequisite: Engr 630. (3)

**632. SLUDGE TREATMENT AND DISPOSAL.** Basic theory of sludge handling; treatment, disposal, and design applications. (3)

**633. PROCESS DYNAMICS AND CONTROL I.** Design of control systems for chemical processes and selected topics of an advanced nature. (3)

**634. TREATMENT & DISPOSAL OF INDUSTRIAL WASTE.** Classification, characterization, and study of industrial waste by category. Selection and combination of unit processes/unit operations for treatment. (3)

**635. OPTIMIZATION.** Theory and practice of optimization, analytical and numerical methods for single- and multivariable functions; functions of continuous variable. (3)

**636. GROUNDWATER MECHANICS.** This course focuses on the physics of subsurface flow and transport, including mass and momentum conservation, storage, compressibility, capillarity and Darcy's Law in porous media. Governing equations, critical assumptions and boundary and initial conditions for models of single and multiphase flow and transport in porous and fractured media are explored. (3)

**637. GROUNDWATER MODELING.** Analysis and synthesis of hydrology problems. Conceptual modeling process, parameter estimation, model validation and model prediction. Mathematical models for steady and transient flow and transport. Applications to well hydraulics, water supply, regional flow,

recharge and infiltration, subsidence, sea water intrusion, surface water/groundwater interaction, groundwater pollution and geotechnical problems. Case studies. (3)

**638. HAZARDOUS WASTE MANAGEMENT.** Introduction to waste management, risk assessment, environmental legislation. Characterization of hazardous waste, minimization and resource recovery, remediation of failed hazardous waste sites, case histories. (3)

**639. ENVIRONMENTAL SYSTEMS ENGINEERING.** Mathematical modeling techniques including Lagrange multipliers, searching, linear programming, dynamic programming, simulation, optimization over time. Numerous applications in environmental engineering. (3)

**640. STREAM AND ESTUARINE ANALYSIS.** Extensive coverage of the fundamentals of stream, estuarine, and ocean interactions. Development of the mathematical formulations in natural waters. (3)

**641. CLAY PETROLOGY.** (Same as Geol 641). (3)

**642. X-RAY DIFFRACTION ANALYSIS.** (Same as Geol 642). (4)

**643. ADVANCED GEOMORPHOLOGY.** Surface processes associated with specific physiographic districts. (3)

**644. CARBONATE PETROLOGY.** Advanced problems in carbonate rock genesis and distribution. (3)

**645. CONTAMINANT TRANSPORT.** Conceptual and mathematical models for the transport of contaminants in natural systems. Primary attention given to contaminant transport in aquifers, with secondary attention given to transport in the unsaturated zone, in the atmosphere, and at the water atmosphere boundary. (3)

**646. ADVANCED STRATIGRAPHY.** Advanced problems in stratigraphy. (3)

**647. PAVEMENT MANAGEMENT SYSTEMS.** Study of basic elements of pavement management; data collection; databases; single-year prioritization; performance prediction; multiyear prioritization; optimization. (3)

**648. NUMERICAL MODELING IN GEOSCIENCE & ENGR.** Numerical methods in geomechanics, including processes in groundwater, soil and rock mechanics. Solutions of ordinary and partial differential equations will be approximated, emphasizing finite-difference methods. Introduction to finite element methods and boundary element methods. (3)

**649. ADVANCED FOUNDATION ENGINEERING.** Earth pressure theories; bearing capacity; control of groundwater in excavation, shoring, and underpinning; foundations subjected to dynamic forces. (3)

**650. RADAR REMOTE SENSING.** Concepts of radar imaging, image systems, image characteristics. Digital processing of SAR images to extract information on Earth's surface. (3)

**652. ADVANCED COMPILER DESIGN.** Investigation into the theory of lexical analysis, syntax-directed translation, type checking, code generation, code optimization, and compiler project coordination. Prerequisite: Csci 525. (3)

**653. COMPUTER STRUCTURES.** In-depth study of the upper levels of computer structure (down to the internal register transfer level) including design choices, design needs, and structural variations in organizing processors, memories, I/O devices, controllers, and communication links. An extensive review of several current machines is made. (3)

**654. INFORMATION SYSTEMS PRINCIPLES.** Introduction to the theory and practice related to the development and operation of information systems. Study of database management principles, data management systems, and general purpose software for data management systems. System and performance evaluation. (3)

**656. OPERATING SYSTEMS DESIGN CONCEPTS.** Design objectives of operating systems. Sequential and concurrent processes, processor management, memory management, scheduling algorithms, resource protection. System design and performance evaluation. (3)

**657. TIMESHARING COMPUTER SYSTEMS.** A study of the major design goals, implementation concepts and mechanisms of timesharing systems, including motivation for the development of timesharing systems and discussions of the hardware/software concepts important to timesharing system implementation. (3)



- 659. ADVANCED INFORMATION RETRIEVAL.** Theoretical aspects of information retrieval. Comparison and evaluation of techniques for enhancement of recall and precision performance. Design of user/system interface; applications of natural language processing. Experimental and intelligent information retrieval systems. (3)
- 660. SOFTWARE ENGINEERING II.** Software quality assurance, software testing techniques, software testing strategies, software maintenance, and configuration management. (3)
- 661. COMPUTER NETWORKS II.** Continued analysis of loosely coupled computer communication, constraints on intercomputer communication, communication protocols, and network services. LAN data link protocols, transport services, and other high-level network functions are examined in detail. Prerequisite: Csci 561 with minimum grade of C. (3)
- 662. ADVANCED ARTIFICIAL INTELLIGENCE.** Advanced aspects of artificial intelligence. Logical foundations of AI. Machine learning, planning, representation of common-sense knowledge, image understanding. Intensive study of artificial intelligence programming techniques and languages. Prerequisite: Csci 531. (3)
- 663. ADVANCED RATE AND EQUILIBRIUM PROCESSES.** Selected topics in fluid mechanics, heat transfer, mass transfer, and other physical separations important to chemical plant design and operation. May be repeated for credit. (3)
- 664. THEORY OF CONCURRENT PROGRAMMING.** Topics in the theory of concurrent programming. Models of concurrency. Programming logics. Emphasis on the formal specification and verification of concurrent programs. Case studies drawn from several areas of computer science. (3)
- 665. THERMODYNAMICS OF CHEMICAL SYSTEMS.** Phase and reaction equilibria in multicomponent chemical engineering applications; non-ideal considerations. (3)
- 666. FAULT TOLERANT COMPUTING.** Reliability, safety, availability, maintainability, and performance modeling; fault-tolerant design in VLSI; software reliability growth models; fault-tolerant data structures and algorithms; design diversity; self-stabilizing fault tolerance; Byzantine failures; performance and reliability tradeoffs. (3)
- 667. MASS TRANSFER I.** Unified treatment of momentum, energy, and mass transport with emphasis on mass transport and transfer in flowing, non-isothermal, multicomponent, reacting systems. (3)
- 669. CHEMICAL REACTION AND REACTOR ANALYSIS I.** Single and multiple reacting systems. (3)
- 670. CHEMICAL REACTION & REACTOR ANALYSIS II.** Single and multiple reacting systems. (3)
- 671. ELASTICITY.** Classical solutions; complex variable solutions, nonlinear elasticity, thermoelasticity, crack propagation, punch problems. (3)
- 672. VISCOELASTICITY.** Integral and differential operator forms of constitutive relationships, relaxation and creep characteristics, integrand and Fourier transform methods. Laplace transform methods and approximate inversion techniques. Dynamic response problems and temperature-dependent effects. Nonlinear behavior characterization. Prerequisite: Engr 617. (3)
- 673. PLASTICITY.** Introduction to the physical foundations of plasticity. Modern treatments of constitutive theory (including thermodynamics and internal variables). Theory of yield plasticity and dynamic plasticity. Prerequisite: Engr 617. (3)
- 674. FRACTURE MECHANICS.** Stress fields near crack tips; modes of fracture; stress intensity factors; numerical methods. Critical stress intensity; fracture toughness. Energy considerations; the J-Integral. Crack-tip plasticity; small-scale yielding; crack-opening displacement. Fatigue; cyclic deformation; fatigue crack initiation. Prerequisite: Engr 617 with minimum grade of C. (3)
- 677. PLATES AND SHELLS.** Classical plate history; variational methods; thick plates; large deflections; membrane theory of shells. Prerequisite: Engr 671. (3)
- 678. ELASTIC STABILITY.** Concepts of stability of equilibrium; buckling of beams, plates and shells under various loadings; approximations of eigenvalues; flutter of elastic systems, wings, panels, and hydrofoils. Prerequisite: Engr 671. (3)

- 679. WAVE PROPAGATION.** Elastic waves, loss mechanisms and attenuation, sources for elastic waves, waves in layered media, effects of gravity, curvature and viscosity, Rayleigh's principle. Prerequisite: Engr 671. (3)
- 680. ADVANCED ACOUSTICS.** Advanced course in theoretical acoustics. The course will treat the acoustic wave equations for a variety of actual physical situations. Prerequisite: Phys 521 with minimum grade of C, Engr 515 with minimum grade of C. (3)
- 683. ADVANCED PHYSICAL METALLURGY.** Discussion of microstructural relationships for understanding material behavior. Topics include defect structure, solidification, transformation mechanisms and kinetics, and microstructural modification techniques. Prerequisite: M E 530 with minimum grade of C. (3)
- 684. ADVANCED MECHANICAL METALLURGY.** Discussion of mechanical and metallurgical fundamentals to explain the mechanical behavior of engineering materials. Applications to tensile and torsional loading, hardness, fatigue, creep, and embrittlement included. Prerequisite: M E 531 with minimum grade of C. (3)
- 685. MECHANICS OF COMPOSITE MATERIALS II.** Advanced techniques of modeling and analyzing the behavior and response of composite material systems. Nonlinear behavior, both constitutive and geometric. Emphasis on the use of finite element analysis, computational simulation. Prerequisite: Engr 585 with minimum grade of C, Engr 590 with minimum grade of C. (3)
- 686. MULTIMEDIA TECHNOLOGIES II.** The design of appropriate instructional material using interactive video production techniques including sound and graphics. Technical analysis of requirements and design tradeoffs. The economics of video disc production will be discussed. Prerequisite: TC 585. (3)
- 687. SPECIAL FUNCTIONS FOR APPLICATIONS.** Polynomials, basic special functions, series and integral solutions of differential equations, asymptotic methods, properties of major special functions, applications. (3)
- 688. CURRENT ISSUES IN TELECOMMUNICATIONS.** Survey of modern communication systems, practices, technology, business applications, and regulatory issues. Wireless systems, protocols, problems in propagation, spectral allocation, and modulation techniques. Asynchronous Transfer Mode and B-ISDN. Use of satellites for personal communications. Prerequisite: TC 501 with minimum grade of C, TC 534 with minimum grade of C. (3)
- 689. CONTROL OF ROBOTICS MANIPULATORS.** Covers topics of robot control such as the linearization of nonlinear models, controller design, adaptive control of robot arm motion, and control of forces and torques exerted on an object by the end-effector. Prerequisite: Engr 559 with minimum grade of C. (3)
- 690. FINITE ELEMENT ANALYSIS II.** Three-dimensional element formulations; nonlinear analysis; dynamic response, time-dependent behavior; advanced mesh-generation techniques. Prerequisite: Engr 590 with minimum grade of C. (3)
- 691. SPECIAL TOPICS IN ENGINEERING SCIENCE I.** May be repeated for credit. (1-3)
- 692. SPECIAL TOPICS IN ENGINEERING SCIENCE II** May be repeated for credit. (1-3)
- 693. RESEARCH TOPICS IN ENGINEERING SCIENCE I** Individual research in selected areas of interest. May be repeated for credit. (1-3)
- 694. RESEARCH TOPICS IN ENG. SCIENCE II.** Individual research in selected areas of interest. May be repeated for credit. (1-3)
- 695. SEMINAR.** Papers by faculty, visiting lecturers, and graduate students. May be repeated for credit. (1)
- 696. SEMINAR IN ENVIRONMENTAL ENGINEERING.** Presentations on topics in environmental engineering/science by faculty, visiting lecturers, and graduate students. May be repeated for credit. (1)
- 697. THESIS.** No grade. (1-12)
- 699. SPECIAL TOPICS IN ENGINEERING SCIENCE.** Individual design or research projects in selected areas of interest. May be repeated for credit. (1-6)

- 702. FINITE ELEMENT ANALYSIS OF FLUID FLOWS.** Applications of FEM for fluid flow simulation; discussion on current developments; research on individual projects. Prerequisite: Engr 590 with minimum grade of C. (3)
- 706. ADV WASTE TREAT PROC IN SANITARY ENG.** An intensive study of the biological processes used for the treatment of domestic sewage and intensive study of the biological processes used for the treatment of domestic sewage and industrial wastes, with special emphasis on environmental factors that affect process rates and efficiencies. (3)
- 711. TURBULENCE.** Introduction to probability theory; stochastic processes and statistical continuum theory; kinematics and dynamics of homogeneous turbulence; isotropic turbulence; turbulent shear flows. (3)
- 712. STATISTICAL THEORY TURBULENT DIFFUSION.** Molecular and turbulent diffusion theories; dispersion of dissolved and suspended matter in closed conduits, streams, lakes, estuaries, oceans. (3)
- 713. HYDRODYNAMIC STABILITY.** General theory of stability; stability of a hydrodynamic system; normal mode analysis; initial value problems; energy dissipation; small and finite disturbances. (3)
- 714. COASTAL HYDRODYNAMICS.** Water wave theory; tides, hurricane surges, harbor resonance, interaction of waves and structures; estuary dynamics; stratified flows; salinity intrusion; modeling. (3)
- 715. APPLIED HYDRO- AND AEROMECHANICS I.** Subsonic internal and external hydro- and aeromechanics; effects of compressibility, cavitations and viscosity; airfoils and finite wings, turbomachinery, slender bodies, wakes and trails. (3)
- 716. APPLIED HYDRO- AND AEROMECHANICS II.** Transonic, supersonic, and hypersonic aerodynamics including viscous effects; blunt bodies and the associated shock layer, aerodynamic heating, ablation. (3)
- 717. SPECIAL TOPICS IN THERMAL SCIENCE.** Selected topics of an advanced nature. May be repeated for credit. (1-3)
- 720. ADVANCED TURBULENCE.** Analytical, theoretical, and numerical approaches to turbulence; turbulence modeling. Prerequisite: Engr 711. (3)
- 729. SPECIAL TOPICS IN ELECTROMAGNETIC THEORY.** May be repeated for credit. (1-3)
- 749. SPECIAL TOPICS IN SOIL SCIENCE.** May be repeated for credit. (1-3)
- 779. SPECIAL TOPICS IN SOLID MECHANICS.** May be repeated for credit. (1-3)
- 797. DISSERTATION.** No grade. (1-18)

### Engineering Science-Engs

Graduate students with academic backgrounds in the traditional areas of engineering may have special interests in the following courses listed under engineering science:

Computer Science: 603, 606

Electrical Engineering: 633

Telecommunications: 610, 627

**603. ANALYSIS OF ALGORITHMS.** Introduction of the analysis of computer algorithms as well as concepts of computational complexity; sorting, matrix multiplication, other (for computer engineering/telecommunications majors). (3)

**606. COMPUTER NETWORKS.** Analysis of loosely coupled computer communication; communication protocols and network services, an open systems interconnection model is presented and compared to selected examples of computer networks (for computer engineering/telecommunications majors). (3)

**610. TELECOMMUNICATION NETWORK ENGINEERING.** Team design project developed in cooperation with industry. Students accomplish the design and document the results in a report and in an oral presentation. Prerequisite: Engr 653 with minimum grade of C, Engs 603 with minimum grade of C, Engs 606 with minimum grade of C. (3)

**611. GEOSPATIAL SCIENCE PRIMER.** This is a course in analysis of spatial measurement systems. Emphasis is placed upon analysis of measurement systems required to produce geodetic reference frameworks (e.g., GPS baseline networks) and map products (e.g., orthophotos, feature databases, and surface models). (1)

**612. REMOTE SENSING FUNDAMENTALS.** This course emphasizes basic remote sensing concepts and aerial photographic data collection and analysis. The Remote Sensing Fundamentals course is focused on understanding the basic principles on which remote sensing is based in general, and how aerial photographic data are acquired and analyzed in particular. Included is treatment of: electromagnetic radiation principles; energy interaction with the atmosphere and earth surface features; analog vs. digital imagery; ground truth considerations; films, analog and digital cameras; basic principles of photogrammetry; mapping from aerial photographs and digital orthophoto production; and an introduction to aerial photographic interpretation. (1)

**613. INTRODUCTION TO REMOTE SENSING SYSTEMS.** This course is an introduction to electro-optical, microwave, and lidar remote sensing systems. Introduction to Remote Sensing Systems is focused on understanding the basic principles, characteristics, and applications of electro-optical, microwave (radar), and lidar remote sensing systems. Included is treatment of: airborne multispectral, thermal, and hyperspectral sensing; earth resource satellites operating in the optical portion of the spectrum (including moderate resolution systems, high resolution systems, and the Earth Observing System); airborne and satellite radar systems, image characteristics, and basic interferometric radar principles; lidar system operation and sample applications. (1)

**614. REMOTE SENSING AND DIGITAL IMAGES.** This course is an introduction to digital image processing. Remote Sensing and Digital Images is focused on providing an introduction to the basic principles and techniques of digital image processing. Included is treatment of: digital data storage formats, data volumes, and elements of digital image processing systems; geometric and radiometric correction; image enhancement; image classification; and multitemporal image analysis. (1)

**620. GEOSPATIAL INFORMATION TECHNOLOGY.** This course is an introduction to the integration of the foundational components of geo-spatial information science and technology into a geographic information system (GIS). Numerous practical and applied geospatial techniques are introduced to demonstrate the use of geospatial information technology to the real world. As a case based course, students work through four distinct sections in the geospatial information technology workflow: 1. Data Collection 2. Data Preparation 3. Data Analysis 4. Data Presentation The components include the fundamentals of geodesy, GPS, cartographic design and presentation, image interpretation, and spatial statistics/analysis. The course addresses the manner in which the components are merged in a geospatial information system. (3)

**621. ORBITAL MECHANICS.** Since the beginning of civilization orbital mechanics has played a large role in a person's grasp of what happens in the universe. People like Aristotle, Ptolemy, Copernicus, Kepler, Newton, and Einstein were giants in this field, but with the advent of the Space Age on October 4, 1957, a familiarity with orbital mechanics became essential for space scientists and especially scientists concerned with remote sensing to understand satellite applications. Today, a good knowledge of orbital mechanics enables a remote sensing technologist to locate where an image has been taken, determine what hour the image was taken, and when the next imaging opportunity will be possible. Additionally a student can determine what happens to a remote sensing satellite when an orbit changes due to a deliberate maneuver or an orbital perturbation. This course uses elementary principles of mathematics, physics, and mechanics to introduce the student to the traditional science required to place a spacecraft into orbit, keep it there, determine its position, and maneuver it. Prerequisite: (Math 121 and 123) or Math 125 required. (3)

**624. INTRODUCTION TO DIGITAL IMAGE PROCESSING** This course introduces students to the fundamental principles of digital image processing applied to remotely sensed data. The course begins with a review of the remote sensing process. Methods of obtaining digital remotely sensed data are then reviewed including digital systems (e.g., scanners, pushbroom sensors) and the process of hardcopy digitization. Fundamental statistical analysis techniques are then reviewed. Typical digital image processing

system characteristics are described with reference to the major software providers. Methods of radiometric correction are introduced including those based on radiative transfer modeling and image-to-image normalization. Image-to-image and image-to-map geometric correction algorithms are described. Image enhancement algorithms that can be used to enhance subtle characteristics for improved visual examination are discussed. Digital methods of extracting information from remotely sensed data are summarized including the key elements of supervised and unsupervised classification and accuracy assessment. The final module describes the logic and algorithms used to perform digital change detection. (3)

**626. COMMUNITY GROWTH.** This course focuses on the use of remote sensing and GIS technologies to facilitate urban planning and infrastructure development for community growth. It introduces to students various aspects of urban growth, such as the effect of urbanization on local and regional environments, and the impact of urbanization on the biophysical characteristics that influence human health. Other important issues, such as urban growth and economic development, public health and safety, traffic and transportation infrastructure, and quality of the life are also explored. (3)

**627. APPLIED PROBABILITY MODELING.** Concepts of probability modeling for applications. Fundamentals of statistical experiments, events, probability laws, conditional probability, random variables, expectation and conditional expectation, introduction to and applications of Markov chains, papers from literature. (3)

**633. MICROWAVE FILTERS.** Error correction for microwave network analyzers. Multiconductor transmission lines, voltage, and current eigenvectors. Lumped element filter prototypes, commensurate filters, impedance inverters. Prerequisite: Engr 623 with minimum grade of C. (2)

**671. DIGITAL TOPOGRAPHIC MAPPING.** This course introduces students to the fundamental concepts and methods of topographic mapping. Maps have been used for centuries to catalog and view the arrangement of things on the Earth's surface. Topographic maps are the most widely used form of all maps as they portray both natural features, manmade objects, and the shape and elevation of the land. Unit 1 describes the role of mapping in ancient and modern society along with the nature of maps and the basic principles of coordinate systems and map projections. Unit 2 reviews data collection techniques including: land surveying techniques, the Global Positioning System, and remote sensing data collection. Unit 3 focuses on cartographic operations; it explains methods of graphic communication and techniques for labeling, generalization and map conflation. Unit 4 familiarizes students with Digital Elevation Models and surface modeling. Triangular Irregular Network and Grid data structures are studied along with various interpolation techniques to reconstruct digital surfaces from measured points. Unit 5 explores various tools to visualize and analyze topographic data. Prerequisite: Student must be admitted to Certificate in Geographic Info Systems program. (3)

**672. REMOTE SENSING AND THE ENVIRONMENT.** This course introduces the fundamental principle and applications of remote sensing of terrestrial and aquatic environments. The course starts with principles of electromagnetic radiation, its interaction with the atmosphere, and its interaction with Earth's surface. Next is an overview of various remote sensing data, including different sensor platforms and data characteristics. There are three separate units that focus on applications of remote sensing of land cover, land use, and aquatic environments. These are followed by a review of methods for transforming and classifying spectral data, including principal components analysis, supervised and unsupervised algorithms, and multispectral and multi-temporal transformations. Next is a discussion of detection of environmental change and a module on accuracy assessment that focuses on how to assess the quality of remote sensing analyses and their results. Finally, the volume concludes with several units on real life case studies around the world and the use of remote sensing to evaluate them. Prerequisite: Student must be admitted to Certificate in Geographic Info Systems program. (3)

**673. ADVANCED DIGITAL IMAGE PROCESSING.** This course teaches students advanced concepts in digital image processing, with explanations and examples that demonstrate how the topics can be applied to remotely sensed images. The course begins with a review of resolution, including spatial, spectral, temporal, and radiometric resolutions. Then the student has the option to choose between the next two modules; discrete image transforms and image quality metrics. The coverage of discrete image transforms

includes theory and examples of sinusoidal, rectangular-waveform, eigen-based, and wavelet transforms. The unit on image quality metrics includes information about manual ratings, mean-square-error, signal-to-noise ratios, etc. After these two modules are completed, the student has the option of three more modules: image enhancement and restoration, image compression, and automated image analysis. For image enhancement, the student is introduced to noise models, as well as various spatial and spectral filters for noise removal. The image compression module introduces the student to transform-based compression schemes, with examples of lossy and lossless schemes. Finally, the automated image analysis module introduces the theory and practical application of 1) segmentation methods, including windowing, thresholding, edge detection, and morphological processing; 2) feature extraction methods, such as shape and texture features; and 3) feature reduction and optimization methods. Prerequisite: Engs 624. (3)

**674. GEOSPATIAL DATA SYNTHESIS AND MODELING.** The analysis and synthesis of geospatial data require complex operations in a variety of data processing environments. This can effectively lead to direct scientific results, policy decisions, or to specific combination of data sets which can serve as input to spatial, process, or simulation models with explanatory and predictive capabilities. This course provides students with detailed conceptual and analytical methods, and the knowledge to support synthesis and modeling of geospatial data in the solution of scientific and policy problems. Typically, these problems require a variety of data sources, each with unique characteristics, models, formats, and error levels. Combination of the data sources is a significant difficulty and requires expertise concerning the data themselves and the methods of data integration, processing, error correction and modeling. After attaining a thorough understanding of geospatial data concepts, some of the specific tools such as spatial modeling, geo-statistics, spatial statistics, simulation, visualization, and integrated raster/vector environments, are examined. The application of these tools to specific data sets forms the concluding phase of the course and leads to application. Prerequisite: Student must be admitted to Certificate in Geographic Info Systems program. (3)

**675. MICROWAVE DATA.** In this course the student is introduced to the basic concepts, theory and applications of microwave remote sensing. The course begins with an explanation of why microwave remote sensing is utilized. Its advantages over visible and infrared remote sensing are described and typical applications are presented. Passive microwave remote sensing is then described beginning with the theory of natural microwave emissions from the Earth's surface and atmosphere. Some of the more widely used sensors are discussed, and many remote sensing applications are presented. The remainder of the course focuses on the other type of microwave remote sensing, active or radar remote sensing. The fundamental principles of radar and the concepts and vocabulary necessary to understand a radar image are presented. The most commonly used type of imaging radar, the Synthetic Aperture Radar (SAR), is described in detail from the principles of operation, interpretation of images, current SAR sensors, to science applications. A recent application of SAR that can measure topography and surface displacement at fine spatial resolution, Interferometric Synthetic Aperture Radar (InSAR), is presented in the following section. The last section is dedicated to the combination and integration, fusion, of microwave remote sensing. Prerequisite: Student must be admitted to Certificate in Geographic Info Systems program. (3)

**681. ADVANCED SENSOR SYSTEMS DATA COLLECTION.** Advanced sensors in remote sensing contribute every day to the imaging capabilities for monitoring Earth's environment and what effect humans are having on it. This course assumes that the student has taken the basic sensors and platforms course which has introduced the sensors and platforms that accomplish essential data collection and have done it masterfully for years. Advanced Sensors is organized into several units that demonstrate the newest active and passive sensors including advanced synthetic aperture radar, lidar, radiometers, spectrometers, microwave sounders, advanced hyperspectral sensors, and the advanced platforms which carry these sensors. This course will delve deeper into the mathematical theory behind sensors such as RADAR, LIDAR, and synthetic aperture radar interferometry operations and will illustrate sensors and platforms using as examples the current advanced sensors aboard satellites such as ENVISAT, GRACESAT, and ADEOS I and II. Operation of advanced aircraft and balloon payloads such as TOP HAT and BOOMERANG will also be investigated. The course will close by looking at the future to determine

tomorrow's advanced sensors and students will realize that today's advanced technologies will become tomorrow's basic technologies. Prerequisite: Engs 523. (3)

**682. REMOTE SENSING TO ECOLOGICAL MODELING.** Remote sensing offers the opportunity to track episodic and catastrophic events in landscapes through time crop maturation, variation in precipitation, floods and to monitor long-term changes resulting from vegetation succession, climatic variation, and human land use. Variables derived from remote sensing can be combined with empirical models to estimate biophysical parameters, which, in turn, can be used to assess ecosystem status and predict species distributions based on resource requirements. This course trains students in cutting-edge techniques and applications of remote sensing to a broad spectrum of issues related to ecological modeling. Students are introduced to the components of an ecosystem and interactions among those components, the suite of data sets available for mapping terrestrial and aquatic ecosystems, ecosystem metrics that can be derived from the latter data, and methods for modeling individual species, multiple species, communities, and ecosystems. The course addresses not only the many opportunities for applying remote sensing data but also the constraints, and considers how such applications can be used to guide ecological assessments, decision making, and adaptive management. Concepts are reinforced with case studies at multiple spatial and temporal levels. Prerequisite: Student must be admitted to Certificate in Geographic Info Systems program. (3)

**683. LAND USE AND LAND COVER APPLICATIONS.** The purpose of this course is to introduce to students the fundamental considerations in creating, updating, assessing, and using land cover and land use information that has been derived from remotely sensed data. Each unit addresses multiple concepts that allow students to answer important questions concerning land cover and land use applications. Students begin with an introduction to the definitions, delineations, and brief histories of land use and land cover information. Next, students focus on data exploration and image classification, including the creation process. The method of detecting change in land use and land cover and the associated updates are outlined and reviewed. Accuracy and assessment of land use and land cover information is also examined, including a discussion on analysis systems. The course also addressed the use of information for predictions of the impact of future decisions and prescriptions for best land management practices and goals. Concepts are illustrated with detailed real world case studies and student exercises. Prerequisite: Student must be admitted to Certificate in Geographic Info Systems program. (3)

**684. AGRICULTURAL APPLICATIONS REMOTE SENSING** This course discusses the application of remote sensing to agricultural production and the supporting technologies that provide for an information-based decision-making process. With the help of this new technology, some producers have adopted precision agriculture and changed field size into smaller, more precise management zones. This course covers the role of remote sensing in crop production, along with the methods it helps create to manage and conserve the natural resources of vegetation, soil, and water. While specific examples of agricultural applications are identified in various types of production, the actual use of precision agriculture technologies is only limited by the imagination of the enduser. What works in one setting for monitoring on a local basis may be utilized in a different manner for inventorying crop production on a regional or global basis. It is under varying conditions of spatial, spectral, radiometric, and temporal resolutions that new technologies are being used. Examples illustrate possibilities for use and adoption by others. These new technologies are being used under varying spatial, spectral, radiometric and temporal resolutions. Throughout the course, examples will illustrate the current uses of these tools and other areas in which they could be adopted. Prerequisite: Student must be admitted to Certificate in Geographic Info Systems program. (3)

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### **Chemical Engineering-Ch E**

Associate Professor Clint W. Williford, Jr., chair • 134 Anderson Hall

[http://www.olemiss.edu/depts/chemical\\_eng/](http://www.olemiss.edu/depts/chemical_eng/)

Graduate or prospective graduate students with backgrounds in chemical engineering may have special interests in the following courses listed under engineering: 551, 553, 594, 601-617, 633-635, 651, 662-670, 711-717.

**511. PROCESS DYNAMICS AND CONTROL.** Modeling of transient systems; design of feedback control systems. Prerequisite: Math 353 or Graduate Standing. (3)

**513. SPECIAL TOPICS IN CHEMICAL ENGINEERING.** May be repeated for credit. (1-3)

**515. RESEARCH SEMINAR.** Philosophy and principles of engineering research. May not be used to satisfy requirements for a B.S. degree in chemical engineering. Z grade. (1)

**520. BIOCHEMICAL ENGINEERING.** An overview of microbiology and biochemistry. The development of models for microbial kinetics. The design of reactors and auxiliary equipment for microbial systems. (3)

**530. COAL UTILIZATION AND POLLUTANTS CONTROL.** The structure, properties, reactivities, and utilization and conversion technologies of coal. Emphasis will be placed on combustion and its environmental issues. (3)

**541. APPL OF CHEMICAL INSTRUMENTATION I.** Theory, use, and limitations of spectroscopic and chromatographic methods of sample analysis. (3)

**542. APPL OF CHEMICAL INSTRUMENTATION II.** Theory, use, and limitations of spectroscopic and chromatographic methods of sample analysis. (3)

**545. COLLOID AND SURFACE SCIENCE.** Fundamental concepts of colloid and surface science. (3)

**560. ADVANCED TRANSPORT PHENOMENA I.** Development and use of the equations of conservation of mass, energy, and momentum in continuous materials. The use of detailed and integral balances. (3)

**561. ADVANCED TRANSPORT PHENOMENA II.** Development and use of the equations of conservation of mass, energy, and momentum in continuous materials. Prerequisite: Ch E 560 or Graduate Standing. (3)

**593. GRADUATE PROJECTS IN CHEMICAL ENGR.** Individual design or research projects for chemical engineering students in the nonthesis M.S. program. Z grade. (1-3)

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### **Civil Engineering-C E**

Professor Yacoub M. Najjar, chair • 106 Carrier Hall

<http://www.civil.olemiss.edu>.

Graduate or prospective graduate students with backgrounds in civil engineering may have special interests in the following courses listed under Engineering: 558, 572, 585, 590-594, 601, 603-604, 617, 630-640, 647-649, 658, 571, 573, 671-679, 685, 687, 690, 696, 702, 706, 711-714.

**511. STRUCTURAL DYNAMICS.** Response of linear SDOF and MDOF systems. Application to frame vibration in complex structures; introduction to continuous systems; modal analysis for steady-state and transient response under dynamic loads in various applications; computer simulation. Prerequisite: C E 411, Math 353, C E 411 or Graduate Standing, C E 411 or C E 311. (3)

**514. PRE-STRESSED CONCRETE DESIGN.** Pre- and post-tensioning technologies; material properties; ACI and AASHTO allowable stresses; response to and design for axial load, flexure, shear, and torsion; applications to buildings and bridges. Prerequisite: C E 412. (3)

**521. ADVANCED MECHANICS OF MATERIALS.** Classical methods for second-order analysis of deformable bodies; failure criteria; torsion of thin walled sections; unsymmetrical bending of straight beams; curved beams; beam on elastic foundation; plates and shells; buckling. Prerequisite: Math 353, Engr 312. (3)



**531. SOIL MECHANICS II.** Soil variability, shear strength, and deformation of multilayered systems; critical state soil mechanics, Convection and Diffusion of ground water flow; settlement analysis; static and dynamic slope stability, dynamic behavior of soils, Computer applications. Prerequisite: C E 431. (3)

**541. FLOW IN OPEN CHANNELS.** Uniform and nonuniform flow; gradually varying flow, rapidly varying flow controls; subcritical and supercritical transitions; unsteady flow; level-pool routing; flood waves. Prerequisite: Engr 323 or Graduate Standing. (3)

**542. FLOW IN POROUS MEDIA.** Steady, homogenous flow; prediction of transport properties; wells, seepage, drainage, re-charge; nonhomogenous flow. Prerequisite: Engr 323 or Graduate Standing. (3)

**543. SEDIMENT TRANSPORT.** Fall velocity, particle size analysis, incipient motion, bed form mechanics, suspended loads; stream flows, natural river processes, transport of liquid-solid mixtures in pipelines. Prerequisite: Engr 323 or Graduate Standing. (3)

**561. CIVIL ENGINEERING SYSTEMS.** Engineering applications of linear programming, dynamic programming, PERT-CPM, game theory; stochastic systems. Prerequisite: Math 264 (or Graduate Standing). (3)

**570. INFRASTRUCTURE MANAGEMENT.** Overview of nation's infrastructure assets and rehabilitation/renovation needs; methodologies for development and implementation of performance monitoring and maintenance management systems for roadways, bridge structures, airports, and other infrastructure facilities; condition assessment and nondestructive evaluation; application of new materials and remote sensing and spatial technologies; Intelligent Transportation System (ITS) and computer applications for infrastructure asset management. (3)

**581. TRANSPORTATION ENGINEERING II.** Advanced topics in transportation engineering and management with emphasis on intermodal facilities; physical design and traffic management; measures of system effectiveness and performance; environmental and social impacts; Intelligent Transportation System (ITS) technologies; applications of remote sensing and spatial technologies and GIS; economic evaluation of alternatives; computer modeling and simulation. Prerequisite: C E 481 (or Graduate Standing). (3)

**585. HIGHWAY PAVEMENTS.** Stress analysis of pavements, traffic estimation, material characterization, condition monitoring and evaluation, current design schemes, computer applications. Corequisite: C E 431. (3)

**590. AIRPORT PLANNING AND DESIGN.** Impacts of national transportation policies with emphasis on ground, aviation, and intermodal facilities; financing resources; collection and use of traffic and passenger data for airport planning and design; travel demand forecasting; capacity analysis; visual aids and air traffic control; runway orientation and geometric design; design of terminal areas and ground access; basic pavement structural design and maintenance management; environmental impacts and economic assessment; airport applications of remote sensing and spatial technologies, GIS, and Intelligent Transportation System (ITS) technologies. (3)

### **Computer and Information Science-Csci**

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Professor H. Conrad Cunningham, chair • 201 Weir Hall

<http://www.cs.olemiss.edu/>

Graduate or prospective graduate students with backgrounds in computer science may have special interests in the following courses listed under engineering: 652-657, 659-662, 664, 666, 686.

#### **Csci**

**500. FUNDAMENTAL CONCEPTS IN COMPUTING.** An intensive study of the formal concepts needed for graduate study in computer science. Prerequisite: Graduate Program Level Only. (3)

**501. FUNDAMENTAL CONCEPTS IN SYSTEMS.** An intensive study of the fundamental concepts of operating system and machine structures and the associated programming techniques. Prerequisite: Graduate Program Level Only. (3)

**502. FUNDAMENTAL CONCEPTS IN ALGORITHMS.** An intensive study of the fundamental concepts of algorithms and data structures and the associated programming techniques. Prerequisite: Graduate Program Level Only. (3)

**503. FUNDAMENTAL CONCEPTS IN LANGUAGES.** An intensive study of the fundamental concepts of programming languages and the associated software system structures. Prerequisite: Graduate Program Level Only. (3)

**517. NATURAL LANGUAGE PROCESSING.** Computer processing of natural language text at morphological, lexical, syntactic, and semantic levels; algorithms and procedures for sentence parsing and analysis; applications of natural language processing techniques. Prerequisite: CSCI 311 or CSCI 500 or Graduate Standing. (3)

**520. FORMAL THEORY OF COMPUTER LANGUAGES.** A detailed study of mathematical models of regular and context-free languages, nondeterministic and deterministic models; closure properties, design algorithms, simplification of grammars. Prerequisite: CSCI 311 or CSCI 500 or Graduate Standing. (3)

**521. COMPUTER SYSTEMS ENGINEERING.** Analysis of computer system components and manufacturing economics, and how they influence design goals, direct architectural development, create hardware/software issues and modify implementation concepts, as well as system and circuit packaging. Prerequisite: CSCI 423 or CSCI 501 or Graduate Standing. (3)

**523. OPERATING SYSTEMS.** Design and construction of operating systems for shared program computers; various contemporary operating systems. Prerequisite: CSCI 423 or CSCI 501 or Graduate Standing. (3)

**524. DISTRIBUTED OPERATING SYSTEM DESIGN.** Analysis of operating system design principles for multiple computers; a distributed operating system model is presented and compared to selected network and distributed operating system examples. Prerequisite: CSCI 423 or CSCI 501 or Graduate Standing. (3)

**525. COMPILER CONSTRUCTION.** Introduction to techniques used in current compilers for computer languages; the syntactic specification of programming languages and an introduction to syntax-directed compiling. Prerequisite: CSCI 311 or CSCI 450 or CSCI 500 or CSCI 503 or Graduate Standing. (3)

**530. COMPUTER ARCHITECTURE AND DESIGN.** Structured organization and hardware design of digital computers; register transfers, micro-operations, control units and timing, instruction set design, microprogramming; automated hardware design aids. Prerequisite: CSCI 423 or CSCI 501 or Graduate Standing. (3)

**531. ARTIFICIAL INTELLIGENCE.** Use of the computer in human problem solving. Game theory, decision trees, Markov decision problems, selected topics. Prerequisite: CSCI 433 or CSCI 502 or Graduate Standing. (3)

**533. ANALYSIS OF ALGORITHMS.** Introduction to the analysis of the efficiency of computer algorithms and concepts of computational complexity; sorting, matrix multiplication, others. Prerequisite: CSCI 433 or CSCI 502 or Graduate Standing. (3)

**541. EXPERT SYSTEMS AND LOGIC PROGRAMMING.** Expert systems and knowledge engineering. Computer systems to emulate human expertise. Rule-based and other knowledge representation techniques. Knowledge engineering as a model for expert systems development; logic programming for expert systems implementation. Prerequisite: CSCI 211 and Math 301 or Graduate Standing. (3)

**550. PROGRAM SEMANTICS AND DERIVATION.** A study of formal methods for the specification, derivation, and verification of computer programs. Predicate logic; notations for specification of programs; programming language semantics; calculational techniques for derivation of programs; case studies. Prerequisite: CSCI 211 and Math 301 or Graduate Standing. (3)

- 551. COMPUTER SYSTEM PERFORMANCE ANALYSIS.** Defining, parameterizing, and evaluating models of computer systems. The emphasis is on applying queuing network models and simulation techniques as tools to evaluate the performance of centralized and distributed computer systems. Prerequisite: (CSCI 423 and Math 375) or CSCI 501 or Graduate Standing. (3)
- 554. WEB ARCHITECTURE AND PROGRAMMING.** Study of Web architecture and programming tools. Analysis of public-port protocols such as HTTP, embedded browser languages, browser extensions and interoperability. Server-side Web components, design, tuning, and security. Server components include HTTP, Common Gateway Interface, database engine, and extensions. Prerequisite: Csci 211 or Csci 223 or Either CSCI 211 and CSCI 223 or Graduate Standing. (3)
- 555. FUNCTIONAL PROGRAMMING.** The principles and techniques of programming with functions. Purely functional programming languages; recursion; higher-order functions; reduction models; strictness; type systems; list operations; infinite data structures; program synthesis and transformation. Prerequisite: CSCI 211 and Math 301 or Graduate Standing. (3)
- 556. MULTIPARADIGM PROGRAMMING.** Principles and practices of software design and programming using languages that feature explicit and convenient support for multiple programming paradigms (e.g., imperative, object-oriented, and functional). Prerequisite: Csci 211, Csci 223, Either CSCI 211 and CSCI 223 or Graduate Standing. (3)
- 561. COMPUTER NETWORKS.** Analysis of loosely coupled computer communication, communication protocols, and network services; an open systems interconnection model is presented and compared to selected examples of computer networks. Prerequisite: CSCI 423 or CSCI 501 or Graduate Standing. (3)
- 562. SOFTWARE ENGINEERING I.** Software engineering paradigms, requirement analysis and specification, design of reliable software; data flow, data structure, and object-oriented design methodologies. Prerequisite: CSCI 387 or Graduate Standing. (3)
- 575. DATABASE SYSTEMS.** Review of database systems with special emphasis on data description and manipulation languages; data normalization; functional dependencies; database design; data integrity and security; distributed data processing; design and implementation of a comprehensive project. Prerequisite: CSCI 423 or CSCI 475 or CSCI 501 or Graduate Standing. (3)
- 581. SPECIAL TOPICS IN COMPUTER SCIENCE I.** May be repeated for credit. Prerequisite: (CSCI 211 and CSCI 223) or Graduate Standing. (1-3)
- 582. SPECIAL TOPICS IN COMPUTER SCIENCE II.** May be repeated for credit. Prerequisite: (CSCI 211 and CSCI 223) or Graduate Standing. (1-3)
- 595. GRADUATE COMPUTER SCIENCE INTERNSHIP.** Internship in approved settings to enhance the educational experience of the student through supervised training in a professional computer science environment. Completion of an internship is recommended for all students, but this credit does not count toward completion of degree requirements. Z grade. Prerequisite: Instructor Approval Required. (3)
- 658. SOFTWARE LANGUAGE ENGINEERING.** Study of topics on the design, implementation, use, and evolution of artificial languages for the engineering of software. Languages of interest include general-purpose programming languages, domain-specific languages, and modeling languages as well as application programming interfaces and collections of design patterns that implicitly define languages. (3)
- 663. SOFTWARE FAMILIES.** Study of concepts, methods, patterns, and tools for the analysis, design, and implementation of software families (e.g., software frameworks and software product lines) and other reusable, generic, and flexible programming artifacts. (3)

#### **Engr**

- 654. INFORMATION SYSTEMS PRINCIPLES.** Introduction to the theory and practice related to the development and operation of information systems. Study of database management principles, data management systems, and general purpose software for data management systems. System and performance evaluation. (3)
- 660. SOFTWARE ENGINEERING II.** Software quality assurance, software testing techniques, software testing strategies, software maintenance, and configuration management. (3)

**661. COMPUTER NETWORKS II.** Continued analysis of loosely coupled computer communication, constraints on intercomputer communication, communication protocols, and network services. LAN data link protocols, transport services, and other high-level network functions are examined in detail. Prerequisite: Csci 561 with minimum grade of C. (3)

### **Electrical Engineering-EI E**

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Professor Ramanarayanan Viswanathan, chair • 302 Anderson Hall

<http://www.ee.olemiss.edu/>

Graduate or prospective graduate students with backgrounds in electrical engineering may have special interests in the following courses listed under Engineering: Engr 618-628, 729 and Engs 627, 633.

**521. ELECTRICAL ENGINEERING PROJECTS I.** Approved investigation of problem under direction of a member of the staff. May be repeated for credit. (3)

**522. ELECTRICAL ENGINEERING PROJECTS II.** Approved investigation of problem under direction of a member of the staff. May be repeated for credit. (3)

**523. MICROWAVE ENGINEERING.** Microwave integrated circuits, scattering matrix description of microwave circuit elements, computer analysis of cascade two-ports, microwave semiconductor devices. Prerequisite: EI E 441 or Graduate Standing. (3)

**525. INTRODUCTION TO ANTENNAS.** Linear antennas and use of computer programs for antenna analysis and design. Arrays of antennas, beam shaping methods, and mathematical techniques. Prerequisite: EI E 441 or Graduate Standing. (3)

**533. ELECTRONIC PROPERTIES OF MATERIALS.** Theories of electron/atom interactions and electron transport are examined to explain the electronic properties of solids. Junctions, magnetic, and optical properties are also discussed with special emphasis on semiconducting materials. (Same as M E 533). (3)

**561. MICROWAVE CIRCUIT DESIGN.** Design projects on passive and active microwave circuits (self-paced). (6 lab hours). Prerequisite: EI E 433 and EI E 523 or Graduate Standing. (2)

### **Geology and Geological Engineering**

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Associate Professor Joel Kuszmaul, chair, 118 Carrier Hall

<http://www.geo.olemiss.edu/>

**Master of Science in Engineering Science • (GEOLOGICAL ENGINEERING).** It should be pointed out that the following collateral courses, some of which are normally listed under “geology” at other universities, are offered by the Graduate School and can be taken for credit toward the advanced degrees in geology and geological engineering: ENGINEERING—Fundamentals of Computer Science, Geophysics I, II, Applications in Geophysics, Heat Transfer, Ground Water Hydrology, Wave Propagation, Turbulence, Statistical Theory of Turbulent Diffusion, Coastal Hydrodynamics, Special Topics in Thermal Science, Special Topics in Soil Science. MARINE BIOLOGY—Marine Science, Salt Marsh Ecology, Marine Ecology. CIVIL ENGINEERING—Sediment Transport, Environmental Engineering II.

### **Geological Engineering-G E**

**500. INTRODUCTION TO GEOCHEMISTRY I.** Application of chemical principles to geological problems. Prerequisite: Geol 221 and Geol 222 (or Graduate Standing). (3)

- 502. CONSTRUCTION GEOLOGICAL ENGINEERING.** Design and construction procedures for geology-related problems in heavy construction. (3)
- 503. ENVIRONMENTAL GEOCHEMISTRY.** Chemical interaction between water and aquifer minerals, organic minerals, and contaminants. Prerequisite: Chem 106 or Graduate Standing. (3)
- 504. ENVI. GEOCHEMISTRY LAB & FIELD METHODS.** Water quality measurement and evaluation for natural, contaminated, and industrial waste water. Prerequisite: Chem 106 or Graduate Standing. (1-2)
- 506. GEOMECHANICS FOR GEOLOGISTS.** Application of geomechanics to geological problems. (3)
- 507. REGIONAL GEOLOGICAL ENGINEERING.** Geological engineering problems associated with each area of the United States. (3)
- 510. REMOTE SENSING.** Interdisciplinary course designed to introduce theory and principles of remote sensing technology. Topics covered will include digital image processing and classification, rectification and projections, interpolation, sensors and platforms, history and theory, as well as other related topics. The course is designed to cover the subject material to allow for multidisciplinary participants. (3)
- 511. SPATIAL ANALYSIS.** GIS analysis of the relationships of mapped features. Course will include application and integration of GIS, image processing, and mathematical modes. (3)
- 513. ECONOMIC GEOLOGY.** Study of the formation and classification of ore deposits; exploration techniques; evaluation of reserves; and extraction techniques. Prerequisite: Geol 222 and Geol 303 (or Graduate Standing). (3)
- 520. GEOL. & G.E. COMPUTER APPLICATIONS.** The use of computer programs for earth science applications. Prerequisite: Geol 221 / 222 / 313 / 315 (or Graduate Standing). (3)
- 525. ENGINEERING SEISMOLOGY.** Origin of earthquakes, their effects on structures and the selection of ground-motion parameters for earthquake-resistant design. (3)
- 530. ADVANCED GEOMECHANICS.** Applications of the principles of geomechanics to engineering problems dealing with earth materials. (3)
- 535. ADVANCED ROCK MECHANICS.** The application of mechanics to solving problems in rock engineering for both surface and underground conditions. (3)
- 560. WASTE DISPOSAL I.** An introduction to the growing problem of managing and disposing of waste products generated by society. (3)
- 561. DESIGN OF WASTE REPOSITORIES.** Assessment of factors that govern site selection, site evaluation, and landfill design. (3)
- 577. GEOPHYSICS I.** The application of geophysical methods and techniques to shallow subsurface investigations. Not intended for students in the B.S.G.E. program. Prerequisite: Math 262, Engr 340, Phys 212 or Phys 214. (3)
- 591. SPECIAL TOPICS.** Lecture or lecture/lab courses on specific topics and on a one-time basis. (1-3)

Additional geological engineering courses listed under engineering include:

- |          |   |
|----------|---|
| Engr 600 | Advanced Geochemistry (3)   |
| Engr 602 | Lithostratigraphy (3)   |
| Engr 614 | Geometrics (3)  |
| Engr 615 | Analytical Petroleum Geology (3)                                  |
| Engr 616 | Isotope Hydrogeology (3)  |
| Engr 620 | Advanced Remote Sensing (3)                                       |
| Engr 641 | Clay Petrology (3)  |
| Engr 642 | X-Ray Diffraction Analysis of Inorganic Crystalline Materials (4) |
| Engr 643 | Advanced Geomorphology (3)  |
| Engr 644 | Carbonate Petrology (3)   |
| Engr 645 | Advanced Sedimentation (3)  |

Engr 646	Advanced Stratigraphy for Engineers (3)
Engr 650	Radar Remote Sensing (3)
Engr 651	Ground Water Hydrology (3)

### Geology-Geol

NOTE: Courses are marked with an asterisk to indicate 2 lecture, 2 laboratory hours.

**500. INTRO. TO GEOGRAPHIC INFORMATION SYSTEMS** Geographic information systems are combinations of computer software, hardware, and database (maps). These systems are used to analyze and display geographical information necessary for government and industrial planning. Prerequisite: Geol 305 Graduate Standing. (3)

**505. HYDROGEOLOGY.** Groundwater hydrology for geologists. Prerequisite: Math 262, Geol 221 / 222 / 303 / 313 (or Graduate Standing). (4)

**506. ADVANCED PETROLOGY.** The genesis of each of the three major rock groups by use of general collections and detailed suites or rocks and by classroom lecture. Prerequisite: Geol 222 and Geol 420 (or Graduate Standing). (4)

**515. DIRECTED STUDIES.** Individual investigation of an original problem either as a senior research problem or a graduate research problem for nonthesis credit. (1-3)

**518. QUANTITATIVE METHODS IN GEO. & GEO ENG.** Quantitative methods in geology and geological engineering. (3)

**530. GEOLOGY FIELD STUDIES.** Field projects for graduate students. Prerequisite: Geol 221 or Geol 222 or Geol 303 or Geol 314 or Graduate Standing. (3)

**535. GEOCHEMISTRY.** Application of chemical principles to geologic problems; crystal chemistry. Prerequisite: Chem 106 and Geol 221 (or Graduate Standing). (3)

**550. OCEANOGRAPHY AND MARINE GEOLOGY.** Advanced study of the principles of ocean basin tectonics, seawater composition, waves, tides, currents, and marine and coastal marine sedimentation. Prerequisite: Geol 314 (or Graduate Standing). (3)

**555. GEOLOGY AND GEOL. ENGINEERING SEMINAR.** A weekly seminar course in diverse earth science subjects for senior or graduate earth science majors. Z grade. (1)

**603. EARTH SCIENCES I.** The solid Earth, the atmosphere, and the hydrosphere as a system, with basic consideration of the place of the physical and biologic sciences in Earth study. (3)

**604. EARTH SCIENCES II.** The solid Earth, the atmosphere, and the hydrosphere as a system, with basic consideration of the place of the physical and biologic sciences in Earth study. (3)

**609. EARTH SCIENCE PROJECTS.** (May be repeated for credit). (1-3)

**610. EARTH SCIENCE PROJECTS.** (May be repeated for credit). (1-3)

**611. ADVANCED STUDIES IN GEOLOGY.** Lecture and study topics that cover areas not included in formal graduate courses. (1-3)

**613. INSTRUMENTAL AND ANALYTICAL PROCEDURE.** Modern techniques and methods for the application of various types of analytical instrumentation in geoscience research. (May be repeated for credit). (1-3)

**614. ADVANCED GEOGRAPHIC INFORMATION SYSTEMS.** GIS&T project design and application; advanced analytical modeling using vector and raster-based data sets. Use of multivariate data and spatial process models. Use of spatial databases will be emphasized. (Same as Engr 614). Prerequisite: G E 511. (3)

**615. GEOSTATISTICS.** Operational aspects and interpretation of geological data using statistics and data analysis. (3)

**630. COASTAL PLAIN GEOLOGY.** Stratigraphy, depositional patterns, and dominant process; emphasis on Gulf Coastal Plain; field studies. (3)

- 641. CLAY PETROLOGY.** Geologic significance of composition and crystal chemistry of the principal clay-mineral and zeolite group. (Same as Engr 641). (3)
- 642. X-RAY DIFF ANALYSIS INORG CRYSTAL MATERIALS** Theory and methods of mineral identification using X-ray diffraction technology. (Same as Engr 642). (4)
- 643. ADVANCED GEOMORPHOLOGY.** Surface processes associated with specific physiographic districts. (3)
- 644. ADVANCED PALEONTOLOGY.** Consideration of specific problems in invertebrate paleontology (including micropaleontology) and paleoecology. (3)
- 645. ADVANCED SEDIMENTATION.** Analysis of sedimentation process and response patterns as indicators of dispositional environment, dispersal, and basin evolution. (3)
- 646. ADVANCED STRATIGRAPHY.** Analysis of components of recent depositional systems and case studies of ancient analogues. (3)
- 647. SEDIMENTARY PETROLOGY.** Advanced treatment of the principals and recent advances in sedimentary petrology with particular emphasis on textural and geochemical aspects of diagnosis. (4)
- 648. METAMORPHIC PETROLOGY.** Metamorphic rock chemistry and mineralogy; time and space relationships of metamorphic rocks in consideration of global tectonics. (3)
- 690. SCIENTIFIC WRITING SEMINAR.** Exercises in scientific writing format and style, with particular emphasis on writing abstracts and manuscripts for publication in refereed archival journals. May be repeated once for credit. (1)
- 697. THESIS.** Research and writing in preparation of a thesis for the M.S. in engineering science-geology degree. May be repeated for credit. No grade. (1-12)

### **Mechanical Engineering-M E**

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Professor A.M. Rajendran, chair • 201 Carrier Hall

[http://www.olemiss.edu/depts/mechanical\\_eng/](http://www.olemiss.edu/depts/mechanical_eng/)

Graduate or prospective graduate students with backgrounds in mechanical engineering may have special interests in the following courses listed under Engineering: 601-604, 611, 711-717 (fluid mechanics); 551, 605-608, 663, 667-668 (thermodynamics, heat and mass transfer); 614-617 (plasmas and magnetohydrodynamics); 585, 590, 683, 684, 685 (materials science and engineering); 671-682 (solid mechanics); 590, 702 (finite elements).

- 521. PROJECTS.** Approved investigation of problem under direction of a staff member. (3)
- 522. PROJECTS.** Approved investigation of problem under direction of a staff member. (3)
- 523. SPECIAL TOPICS IN MECHANICAL ENGINEERING.** Supervised reading of specialized topics beyond these available in existing courses. (3)
- 524. SPECIAL TOPICS IN MECHANICAL ENGINEERING.** Supervised reading of specialized topics beyond these available in existing courses. (3)
- 525. ADVANCED DYNAMICS.** Rigid body dynamics, vibrations, Lagrangian and Hamiltonian formulations; application to mechanical engineering problems. Prerequisite: M E 325 or Graduate Standing. (3)
- 526. EXPERIMENTAL METHODS.** Generalized theory for designing engineering experiments, processing experimental data, including proper procedures for handling time varying quantities and uncertainties. Some state-of-the-art techniques will be used to illustrate the theory. (3)
- 527. MATERIALS PROCESSING.** Metal processing, including casting, forging, press operation machining; plastic fabrication, including casting, molding, press forming; tool and die designs; coatings. Prerequisite: M E 427 or Graduate Standing. (3)

**528. POLYMER PROCESSING.** Analytical non-Newtonian fluid mechanical approach to polymer processing techniques; calendars, screw pumps, extruders, mixing, injection molding and bonding operations. Prerequisite: Engr 322 or Graduate Standing. (3)

**530. PHYSICAL METALLURGY.** Application of chemical and microstructural control for understanding material behavior. Topics include a survey of relevant areas of thermodynamics and kinetics, phase diagrams, diffusions, solidifications, solid state transformations, recovery, recrystallization, and grain growth. Prerequisite: Engr 313 or Graduate Standing. (3)

**531. MECHANICAL BEHAVIOR OF ENGR MATERIALS.** The dislocation concept of plastic deformation is introduced and used to explain the relationships between microstructure and mechanical properties. The phenomena of strain hardening, creep, fatigue, and fracture are discussed in detail. Prerequisite: Engr 313 or Graduate Standing. (3)

**532. GLASS AND CERAMICS.** The application of atomic structure to a study of physical properties of amorphous systems and ceramics. Topics include classical ceramic bodies, glasses, refractories, cements, cermets, and electronic ceramics. Prerequisite: Engr 313 or Graduate Standing. (3)

**533. ELECTRONIC PROPERTIES OF MATERIALS.** Theories of electron/atom interactions and electron transport are examined to explain the electronic properties of solids. Junctions, magnetic and optical properties are also discussed with special emphasis on semiconducting materials. (Same as EI E 533). (3)

**534. PROPERTIES AND SELECTION OF MATERIALS.** Fundamental relationships that govern the properties of materials will be examined and used to optimize the selection of engineering materials. Materials covered will include metals, plastics, ceramics, and composites. (3)

**535. EXPERIMENTAL STRESS ANALYSIS.** The theories of experimental stress analysis techniques are examined in detail with special emphasis on the application of strain measurement methods, brittle coatings, transmission, and reflection photoelasticity. (3)

**538. EXPRL CHARACTER OF POLYMER COMPOSITES.** Methods for the experimental characterization of polymeric composites. Topics include testing standards, test methods, and data analysis procedures. Prerequisite: Engr 313 or Engr 314 or Graduate Standing. (3)

**540. FAILURE ANALYSIS.** Tools, techniques, and theories of failure analysis. Topics include failure analysis tools, mechanical aspects of failure analysis, microfractographic features, macrofractographic features, and the role of failure in design. Prerequisite: Engr 313 or Engr 314 or Graduate Standing. (3)

**541. THEORY AND USE OF CAD AND SOLID MODELING.** This course will introduce students to the theory and utilization of modern CAD/CAM/CAE systems. Students will learn techniques and methods of solid modeling, will apply these tools to the design process, and will develop the ability to utilize solid models for communication, analysis, and manufacturing. (3)

**555. HEATING VENTILATION AND AIR-CONDITIONING.** The theory and design of heating, ventilating, and air-conditioning systems for buildings with emphasis on using the fundamental principles of thermodynamics, heat transfer, and fluid mechanics, and current technology to meet energy conservation standards and environmental regulations. Prerequisite: Engr 321 or Engr 322 or Graduate Standing. (3)

## **Telecommunications-TC**

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Alexander Cheng, Dean, 20 Anderson Hall

**501. FOUNDATIONS OF COMMUNICATIONS.** A theoretical foundation for the analysis and design of communications systems. Fourier analysis, Nyquist sampling theorem, and the Shannon Channel Capacity theorem. analog and digital modulation techniques, including amplitude, frequency, and pulse code modulation, etc. (3)

**529. TELEVISIONS SYSTEMS I.** The history of television will be presented. Early approaches to imagery transmission will be covered. The emergence of the NTSC standard for black-and-white TV will be emphasized, as will the compromise leading to color TV. Fundamentals of TV engineering will be covered. Prerequisite: T C 409 (or Graduate Standing). (3)



**531. ADVANCED SATELLITE COMMUNICATIONS.** Detailed consideration of the technical aspects of satellite communications, including microwave link engineering, multiple access and modulation techniques used in modern satellites as well as the logistics involved in developing and launching telecommunications satellites. Prerequisite: T C 431 (or Graduate Standing). (3)

**533. ADVANCED OPTICAL COMMUNICATIONS SYSTEMS.** Detailed consideration of the technical aspects of optical communications systems, including light wave system components, propagation, loss by dispersion and absorption, and systems measures (i.e. signal-to-noise ratio). Prerequisite: T C 433 (or Graduate Standing). (3)

**534. WIRELESS MOBILE COMMUNICATIONS.** Focuses on today's modern cellular and personal communications systems, satellite-based systems, and their technical and regulatory aspects. The technical aspects include modulation techniques, propagation characteristics, bit error rate, and multipath. Prerequisite: T C 491 (or Graduate Standing). (3)

**535. DIGITAL COMMUNICATIONS.** Random processes, Wiener filters, digital communication fundamentals including digitization and modulation, performance of analog and digital communication systems in the presence of noise, and optimal signal detection. Prerequisite: EI E 447, EI E 391. (3)

**585. MULTIMEDIA TECHNOLOGIES I.** Introduction to the technologies and applications of what is called multimedia in the telecommunications and computer industries. The laser and compact discs are introduced as adjuncts to the computer. Interactive uses are defined and demonstrated. (3)

## School of Pharmacy

David D. Allen, dean

Leigh Ann Ross, associate dean for clinical affairs

Charles D. Hufford, associate dean for research and graduate programs

Marvin C. Wilson, associate dean for academic and student affairs

Alicia S. Bouldin, research associate professor for instructional assessment and advancement

1018 Thad Cochran Research Center

<http://www.pharmacy.olemiss.edu/>

**Overview:** The School of Pharmacy offers the Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) in pharmaceutical sciences with emphasis areas in environmental toxicology, medicinal chemistry, pharmacognosy, pharmacology, pharmaceuticals, and pharmacy administration. The programs prepare students for teaching and research positions in universities and colleges, and research positions in the pharmaceutical, chemical, agrochemical, and administrative food industries, government, and research institutions.

**Preliminary Requirements:** To be assured of consideration for admission in the fall semester, an application must be received in full (application form, transcripts, letters of recommendation, official GRE, GMAT, and TOEFL test scores) in the Graduate School by the deadlines posted on the Graduate School's website (March 1 or April 1, depending on the emphasis area for admission in the fall of the same year). All applicants will be considered for financial aid; no specific application is required. Two letters of recommendation are required for each emphasis area, except as indicated below. The letters should include at least one from a faculty member in the student's major department. Admission to all emphasis areas is competitive; an applicant meeting the indicated minimum admission requirements is not assured admission. Admission requirements peculiar to each emphasis area are listed below.

**Environmental Toxicology**—background in pharmacy, toxicology, chemistry, biological sciences, or another program that provides a sound background in the biological and physical sciences; three letters of recommendation; personal statement.

**Medicinal Chemistry**—undergraduate degree in pharmacy, chemistry, or related area; undergraduate requirements that may need to be satisfied during graduate study (or can be completed prior to graduate study), depending on the student's selected research problem and area of interest, can include biochemistry, instrumental analysis, pharmacology, and physical chemistry.

**Pharmaceuticals**—undergraduate or higher degree in pharmacy or related area; B average or better in previous course work; minimum of 600 on the paper-based TOEFL (or 100 on the Internet-based TOEFL); the following course work, if not previously taken, will be required of students: calculus through elementary differential equations, 6 semester hours of physical chemistry (equivalent to Chem 331, 332), college-level biology).

**Pharmacognosy**—undergraduate degree in pharmacy, chemistry, biology, or some other related program, e.g., environmental chemistry or chemical ecology.

Pharmacology—undergraduate degree in pharmacy, toxicology, chemistry, biological science, psychology, or a related field.

Pharmacy Administration—Admission Requirements: application deadline, February 1. Applicants must have a B.S. degree in pharmacy, a B.S. degree in pharmaceutical sciences, or higher. (A degree in a discipline related to marketing, management, economics, or other health-related field may also be considered for admission upon demonstration of a commitment to pursuing a career in the field of pharmacy or the pharmaceutical industry.) College transcripts with a minimum of a B average (3.0 on a 4.0 scale) are required. Applicants must take and submit the scores from either the GRE or the GMAT. International applicants also must take the TOEFL examination and score at least 600 (paper-based test), 100 on the Internet-based test, or 250 on the computer-based test. Two letters of recommendation, an interview, a resume, and a statement of purpose are used to evaluate candidates.

If an applicant has a master's degree, he or she may petition in writing to the department chair for transfer, substitution, or waiver of certain courses upon entry into the program. The faculty will evaluate the request, following the Graduate School policies, and determine which courses, if any, can be waived or substituted. If an applicant has completed a thesis, he or she is asked to provide a copy of the thesis for review to determine whether waiver of certain courses is acceptable. Substitution or waiver of courses will then be documented on the student's progression form.

Additional Information: See the School of Pharmacy's website for full information about each emphasis area: [www.pharmacy.olemiss.edu](http://www.pharmacy.olemiss.edu).

#### **M.S. in Pharmaceutical Sciences**

Description: The M.S. in pharmaceutical sciences can be completed with an emphasis in environmental toxicology, medicinal chemistry, pharmaceuticals, pharmacology, pharmacognosy, or pharmacy administration.

Course Requirements: Requirements for each emphasis area are given in the respective program description sections. Each emphasis area requires students to complete a minimum of 24 semester hours of course work and 6 hours of thesis.

#### **M.S. in Pharmaceutical Sciences, Emphasis in Environmental Toxicology**

Description: The M.S. in pharmaceutical sciences with an emphasis in environmental toxicology prepares a graduate to perform research and solve problems related to environmental health issues. Graduates are likely to find careers in academics, industry, or government service.

Course Requirements: The M.S. in pharmaceutical sciences with an emphasis in environmental toxicology requires a minimum of 24 hours of graduate course work and 6 credit hours of thesis. The following core curriculum is required:

Phcl 547-Introduction to Environmental Toxicology (2 hours)

Bisc 504-Biometry (3 hours)

Phcl 675-Principles of Pharmacology and Toxicology I (4 hours)

Phcl 676-Principles of Pharmacology and Toxicology II (4 hours)

Each semester, a seminar program is arranged. Master's students will present two seminars, one of which can be the student's thesis work.

Other Academic Requirements: A thesis based upon an independent research project followed by an oral defense of this project is required for students seeking the master's degree.

### **M.S. in Pharmaceutical Sciences, Emphasis in Medicinal Chemistry**

Description: The M.S. in pharmaceutical sciences with an emphasis in medicinal chemistry prepares a graduate to do research toward understanding the mechanism of action of drugs. In such research, a medicinal chemist strives to establish correlations between biological properties and physicochemical parameters of drugs.

Course Requirements: Requirements for the M.S. in pharmaceutical sciences with an emphasis in medicinal chemistry are to complete at least 30 hours, to include the following:

1. Students entering the program with no background in medicinal chemistry will take Advanced Medicinal Chemistry I, II (Medc 501, 502) (6 hours);
2. Medicinal Chemistry Research Methodology (Medc 503) (3 hours);
3. Seminar on Current Medicinal Chemistry Topics (1 hour).

Two departmental seminars are required of master's degree candidates. Students are required to attend seminars each semester irrespective of whether they present a seminar that semester or whether they are enrolled in seminar. Students are encouraged to take at least one drug action and design course.

Other Academic Requirements: A thesis is required.

### **M.S. in Pharmaceutical Sciences, Emphasis in Pharmaceutics**

Description: The M.S. in pharmaceutical sciences with an emphasis in pharmaceutics deals with the science of dosage form design and embraces all facets of the process of turning a new chemical entity into a medication that can be safely and effectively used by patients.

#### Course Requirements

The M.S. in pharmaceutical sciences with an emphasis in pharmaceutics requires the following courses:

1. Seminar in Current Pharmaceutical Topics (Phar 543, 544).
2. Statistics and Experimental Design (Bisc 504 or Psy 501).
3. Analytical Pharmaceutics (Phar 635).
4. Advanced Pharmacokinetics (Phar 660).
5. Product Development (Phar 649).

In addition, two of the following electives are required:

1. Advanced Pharmaceutics (Phar 641).
2. Stability of Pharmaceutical Systems (Phar 644).
3. Surface Phenomena (Ch E 545).
4. Special Problems in Biopharmaceutics (Phar 654).
5. Applied Pharmaceutics (Phar 650).

Additional courses may be required by the student's graduate adviser and/or advisory committee. If a required course is unavailable, the Department of Pharmaceutics' graduate faculty may approve an alternative course for a particular student.

Other Academic Requirements: A thesis based on experimental work in the general area of pharmaceutics is also required. Prior to the student's thesis defense, the student must have a minimum of one completed manuscript ready for submission to a refereed journal for publication.

Note: An applicant may enter the Ph.D. program directly, without having to enroll in the master's program.

### **M.S. in Pharmaceutical Sciences, Emphasis in Pharmacognosy**

Description: The M.S. in pharmaceutical sciences with an emphasis in pharmacognosy involves the study of bioactive natural substances found in terrestrial and marine organisms.

Course Requirements: Requirements for the M.S. in pharmaceutical sciences with an emphasis in pharmacognosy include

1. Seminar on Topics of Interest in Natural Products (Phcg 543, 643) 2 hours;
2. Natural Product Chemistry (Phcg 627, 628), 6 hours;
3. Selected Topics in Pharmacognosy (Phcg 620): Introduction to Molecular Cell Biology, 6 hours.

The master's candidate will present a minimum of 24 hours of credit in course work past the baccalaureate in addition to 6 hours in thesis (Phcg 697). The student will need to select at least two additional elective courses, at least one of which must be selected from offerings outside the department.

An M.S. candidate must present two seminars, one on a selected topic and one involving his/her thesis defense.

Other Academic Requirements: A thesis based upon experimental work in the general area of pharmacognosy is required.

### **M.S. in Pharmaceutical Sciences, Emphasis in Pharmacology**

Description: The M.S. in pharmaceutical sciences with an emphasis in pharmacology involves the study of the interaction of drugs, chemicals, and physical agents with biological systems and their constituent parts.

Course Requirements: The M.S. in pharmaceutical sciences with an emphasis in pharmacology or toxicology requires the core courses listed below, as well as at least 6 thesis hours. In addition, students are expected to enroll in the Pharmacology Seminar (Phcl 643) each semester. Students who have earned a baccalaureate degree in pharmacy, toxicology, chemistry, biological science, psychology, biochemistry, medicine, or a related field are eligible to apply for admission to the graduate program. Undergraduate course prerequisites include physiology, biochemistry or cell biology, advanced mathematics (level of calculus), and organic chemistry.

Graduate Course Requirements

1. Introduction to Pharmacology I (Phcl 563), 4 hours;
2. Principles of Life Science Research (Phcl 501), 1 hour;
3. Quantitative Methods in Psychology 1 (603) or equivalent, 3 hours;
4. General Principles of Pharmacology and Toxicology I (Phcl 675), 4 hours;
5. Physiological Chemistry (Phcl 669), 4 hours;
6. Advanced Physiology (Phcl 661), 4 hours;
7. Directed Studies in Pharmacology and Toxicology (Phcl 651), 1 hour;
8. Teaching in Pharmacology and Toxicology (Phcl 611, 612), 1 hour, 1 hour;
9. Seminar: Current Topics in Pharmacology and Toxicology (Phcl 643), 4 hours;
10. Thesis (Phcl 697), 6 hours.

Other Academic Requirements: An experimental research project and thesis in the area of pharmacology or toxicology is required.

### **M.S. in Pharmaceutical Sciences, Emphasis in Pharmacy Administration**

Description: The Department of Pharmacy Administration prepares graduates to be social and behavioral scientists who apply and develop theories to understand aspects of the health-care arena and its participants. Examples of specific areas of inquiry include the marketing and economics of pharmaceuticals, patient and provider behaviors in the health care system, management strategies within health systems, the health outcomes associated with using pharmaceuticals, and the roles of pharmacists in delivering and managing health care. This scientific discipline is particularly interested in how these areas are influenced by pharmacists and other health care providers, pharmaceutical manufacturers, governmental entities, and pharmaceuticals.

A graduate degree in pharmacy administration affords excellent career opportunities in a variety of settings. The graduate program has maintained an exceptional track record in placing graduates. Graduates of the program have obtained positions in academia, the pharmaceutical industry, managed care organizations, professional associations, consulting and marketing research firms, government agencies, hospitals, and health care journal publication agencies. In academia, the program has produced several chairs of pharmacy administration departments and deans of pharmacy schools nationwide. In the pharmaceutical industry, many alumni have quickly risen to senior management positions in marketing, health/pharmaceutical economics, and pharmacy affairs. Other graduates of the program have secured key positions in the federal and state governments and professional associations in pharmacy.

Admission Requirements: application deadline, February 1. Applicants must have a B.S. degree in pharmacy, a B.S. degree in pharmaceutical sciences, or higher. (A degree in a discipline related to marketing, management, economics, or other health-related field may also be considered for admission upon demonstration of a commitment to pursuing a career in the field of pharmacy or the pharmaceutical industry.) College transcripts with a minimum of a B average (3.0 on a 4.0 scale) are required. Applicants must take and submit the scores from either the GRE or the GMAT. International applicants also must take the TOEFL examination and score at least 600 (paper-based test); 100 on the Internet-based test; or 250 on the computer-based test. Three letters of recommendation, an interview, a resume, and a statement of purpose are used to evaluate candidates.

#### Goals/Mission Statement

Program Objectives: The graduate program in pharmacy administration has the following objectives for its graduate program.

- To prepare highly qualified graduate students for careers in academia, industry, and other settings with training in management, marketing, and economics of pharmaceuticals and pharmacy practice
- To maintain highly productive teaching and research programs that facilitate the acquisition of abilities necessary to create new knowledge
- To maintain a leadership role in state and national organizations relevant to the discipline
- To provide consultative services to pharmacists, the pharmaceutical industry, and other interested entities in the areas of faculty and graduate student expertise

#### Required Courses—(21 credits)

Psy 603 or Edrs 501 or Soc 501 (Statistics)

Phad 579-Primary Data Techniques

Phad 688-Research Methods in Pharmacy Administration

Phad 689-Pharmaceutical and Healthcare Policy

Phad 693-Health Economics

Phad 687-Secondary Data Techniques

Phad 692-Drug Development and Marketing

3 electives approved by adviser (9 credits)

Thesis—Phad 697 (6 credits)

**Other Academic Requirements:** In addition to the course requirements, each student must participate and complete an orientation to the discipline of pharmacy administration and register for a departmental seminar (Phad 543/544) each semester (1 credit hour per semester). Each student must also prepare and successfully defend a thesis prospectus, and complete and defend his or her thesis project.

#### **Ph.D. in Pharmaceutical Sciences**

**Description:** The Ph.D. in pharmaceutical sciences can be completed with an emphasis in environmental toxicology, medicinal chemistry, pharmaceuticals, pharmacology, pharmacognosy, or pharmacy administration.

**Course Requirements:** Requirements for each emphasis area are given in the respective program description sections.

#### **Ph.D. in Pharmaceutical Sciences, Emphasis in Environmental Toxicology**

**Description:** The Ph.D. in pharmaceutical sciences with an emphasis in environmental toxicology prepares a graduate to perform independent research and solve problems related to environmental health issues. Graduates are likely to find careers in academics, industry, or government service.

**Course Requirements:** The core requirements for the Ph.D. in pharmaceutical sciences with an emphasis in environmental toxicology are

Phcl 547-Introduction to Environmental Toxicology (2 hours)

Phcl 675-Principles of Pharmacology and Toxicology I (4 hours)

Phcl 676-Principles of Pharmacology and Toxicology II (4 hours)

Bisc 504-Biometry (3 hours)

Additional course work may include Medc 610; Phcg 620 (marine toxins, chemical ecology, and biochemical adaptations); Phcg 627-628; Phcl 581, 661, 669; Bisc 553, 632; Chem 512, 580; and Geol 532. These elective courses are determined in consultation with the student's advisory committee.

**Other Academic Requirements:** Doctoral students are also required to present a minimum of four seminars; one of these presentations can be on the student's dissertation research.

Doctoral students must complete a comprehensive examination (both written and oral components), administered by the student's advisory committee and the program's Admission, Retention, and Review Committee. Students must prepare a dissertation prospectus, and prepare and orally defend a dissertation based on original, independent research.

#### **Ph.D. in Pharmaceutical Sciences, Emphasis in Medicinal Chemistry**

**Description:** A Ph.D. in pharmaceutical sciences with an emphasis in medicinal chemistry prepares a graduate to do basic research toward understanding the mechanism of action of drugs. In such research, a medicinal chemist strives to establish correlations between biological properties and physiochemical parameters of drugs. The field is devoted to the discovery and rational development of new agents in the treatment of diseases.

**Goals/Mission Statement:** The mission of the Department of Medicinal Chemistry is to apply chemistry and the chemically related sciences to the teaching of professional pharmacy students and graduate students. The research mission of the department is the discovery, design, analysis, and the further development of potential drugs and the discovery of potential drug design targets.

Course Requirements: The requirements for the Ph.D. in pharmaceutical sciences with an emphasis in medicinal chemistry consist of a minimum of 21 graduate course hours in medicinal chemistry, 6 hours of chemistry courses, and 6 hours of elective credit. These requirements can be satisfied in the following way:

1. Advanced Medicinal Chemistry I, II (Medc 501 and Medc 502) (6 hours);
  2. Drug Action and Design (DAD) courses (four out of seven) (12 hours);
  3. Seminar on Current Medicinal Chemistry Topics (Medc 543 and/or Medc 544) (2 hours);
  4. Chemistry courses 500/600 level (6 hours); Advanced Organic Chemistry (Chem 527, 528) is recommended;
  5. Graduate-level elective courses (contingent upon research adviser approval) (6 hours); Analysis of Natural Products Drugs (Phcg 632 or 633) is recommended;
  6. Problems in Medicinal Chemistry (Medc 541 or Medc 542) (1 hour).
- Seminar Requirement—Students are required to register for either Medc 643 (fall) or Medc 644 (spring) every semester, with the exception of those semesters when the student presents a seminar and should register for either Medc 543 (fall) or Medc 544 (spring).

#### Other Academic Requirements

Cumulative Examinations—Cumulative exams will be administered monthly throughout the calendar year. Once a student has officially entered the exam process, that student will have 18 opportunities to pass five examinations from at least four different department faculty members. He/she is required to pass a minimum of two of the first 12 exams administered.

Original Research Proposal—A student must prepare, submit, and successfully (orally) defend an original research proposal (ORP). Procedures for this requirement will be provided by the department or adviser.

Dissertation--A student must prepare and orally defend a dissertation based on original, independent research.

#### **Ph.D. in Pharmaceutical Sciences, Emphasis in Pharmaceutics**

Description: The Ph.D. in pharmaceutical sciences with an emphasis in pharmaceutics deals with the science of dosage form design and embraces all facets of the process of turning a new chemical entity into a medication that can be safely and effectively used by patients. Pharmaceutics deals with the formulation of drugs into dosage forms such as tablets, capsules, creams, gels, ointments, transdermal and transmucosal patches, solutions, sprays, drops, injectables, and many others.

Goals/Mission Statement: The primary missions of the Department of Pharmaceutics include providing curricular content in the areas of physical pharmacy, basic pharmacokinetics, dosage forms, and drug delivery systems, and biopharmaceutics in both the Bachelor of Science in Pharmaceutical Sciences (B.S.P.S.) and the Doctor of Pharmacy (Pharm.D.) professional degree programs. In addition, the department's educational mission is to educate Ph.D. graduates with scientific competence in these related areas of expertise, including preformulation, formulation, pharmaceutical processing, and novel drug delivery systems. The departmental faculty also provides this same expertise as members of multidisciplinary teams, to scientific projects conducted in the National Center for Natural Products Research (NCNPR).

Course Requirements: The graduate course work requirement for the Ph.D. in pharmaceutical sciences with an emphasis in pharmaceutics includes

- Product Development (Phar 649)
- Statistics and Experimental Design (Bisc 504 or Math 597)
- Analytical Pharmaceutics (Phar 635)



- Advanced Pharmaceutics (Phar 641)
- Surface Phenomena (Ch E 545)
- Stability of Pharmaceutical Systems (Phar 644)
- Advanced Pharmacokinetics (Phar 660)
- Seminar in Current Pharmaceutical Topics (Phar 543, 544)
- Applied Pharmaceutics (Phar 650)

Additional courses may be required by the student's research director and/or advisory committee. If a required course is unavailable, the Department of Pharmaceutics graduate faculty may approve an alternative course for a particular student.

#### Other Academic Requirements

**Comprehensive Examination:** After completion of all course work, including any additional course work required by the research director and/or dissertation committee, a student must successfully pass a comprehensive examination. If a student fails one of the sections of the exam, he or she will be allowed to retake a second exam from a given faculty member. If a student fails more than one section of the exam, he or she will be terminated from the Ph.D. program and allowed to enter the master's program. After passing the exam, a student enters the candidacy stage.

**Dissertation Prospectus and Dissertation:** Doctoral students must prepare and orally defend a dissertation prospectus before their dissertation committee. Doctoral students must prepare and orally defend their dissertation, based on original and independent research, before the same committee. The general procedures and composition of the committee are governed by Graduate School policy.

Note: An applicant may enter the Ph.D. program directly, without having to enroll in the master's program.

#### **Ph.D. in Pharmaceutical Sciences, Emphasis in Pharmacognosy**

**Description:** The Ph.D. in pharmaceutical sciences with an emphasis in pharmacognosy involves the study of bioactive natural substances found in terrestrial and marine organisms. "Pharmacognosy" derives from the Greek words "pharmakon" or drug, and "gnosis" or knowledge. The program prepares students for academic or research positions in universities, industry or government.

**Goals/Mission Statement:** The Department of Pharmacognosy seeks to contribute to the expansion and advancement of knowledge in the pharmaceutical sciences and related areas through cutting-edge research activities, both basic and applied, and to engage in other scholarly pursuits. This includes as a major emphasis the discovery of new potential chemotherapeutic agents through a study of naturally occurring biologically active substances.

The Ph.D. program emphasizes the chemistry and biology of natural products; the mechanisms of drug actions; the isolation, purification, analysis, structure determination, biosynthesis, and synthesis of naturally occurring substances, structure-activity relationships of bioactive substances, and analytical procedures involving drugs and their metabolites.

**Course Requirements:** Requirements for the Ph.D. in pharmaceutical sciences with an emphasis in pharmacognosy include the following core courses:

1. Seminar on Current Topics of Interest in Natural Product Chemistry (Phcg 543, 544, 643, 644), 4 hours
2. Natural Product Chemistry (Phcg 627, 628), 6 hours
3. Selected Topics in Pharmacognosy (Phcg 620-Section 1), Introduction to Molecular Cell Biology (Phcg 635), 6 hours

A Ph.D. student will take at least four additional 500/600-level courses, at least three of which are from outside the department from the fields of pharmacology, biochemistry, medicinal chemistry, organic chemistry, botany, microbiology, marine biology, or other approved electives.

#### Other Academic Requirements

**Seminars**—Each semester, a seminar program will be arranged. Each student will present a minimum of four seminars during the period of graduate study, two on assigned topics, one on a topic of his/her choice, and his/her dissertation defense.

**Comprehensive Examination**—For admission to candidacy, the student must successfully complete both written and oral comprehensive examinations administered by the faculty of the department. The oral comprehensive examination will be given within 60 days of the completion of the written comprehensive examination. Students who fail to pass the required comprehensive examinations after two attempts will be terminated from the doctoral program.

**Original Research Proposal**—Within six months of passing the oral comprehensive examination, doctoral students will submit and orally defend an original research proposal.

**Dissertation**—After completing all other requirements, a doctoral candidate must present and orally defend his/her dissertation, which is based on original, independent research.

#### **Ph.D. in Pharmaceutical Sciences, Emphasis in Pharmacology or Toxicology**

**Description:** The Ph.D. in pharmaceutical sciences with an emphasis in pharmacology or toxicology involves the study of the interaction of drugs, chemicals, and physical agents with biological systems and their constituent parts. This includes determining and understanding the mechanism of action of therapeutic and hazardous substances for the preservation and protection of health and the environment.

**Goals/Mission Statement:** The mission of the Department of Pharmacology is to train future scientists and educators in the fields of pharmacology and toxicology. To accomplish our mission, we provide didactic, practical, and hands-on training in all aspects of these disciplines to our students. The ultimate goals of our program are to contribute to the knowledge base of the disciplines of pharmacology and toxicology and to produce well-trained scientists who can engage in successful and productive careers in pharmacology and toxicology.

**Course Requirements:** The Ph.D. in pharmaceutical sciences with an emphasis in pharmacology requires the following core course work, along with 18 hours of dissertation:

Phcl 611, 612-Teaching in Pharmacology and Toxicology

Phcl 669-Physiological Chemistry

Phcl 563, 564\*-Introduction to Pharmacology

Phcl 675, 676\*\*-General Principles of Pharmacology and Toxicology, I, II

Phcl 661-Advanced Physiology

Psy 603-Quantitative Methods in Psychology I (or equivalent)

Phcl 501-Principles of Life Science Research

Phcl 651-Directed Studies in Pharmacology and Toxicology

Phcl 643-Pharmacology Seminar (to be taken each semester)

\*Phcl 564-not required for toxicology track

\*\*Phcl 676-not required for pharmacology track

The student's adviser will assist in course selection.

Other Academic Requirements: Written and oral comprehensive exams precede admission to the dissertation stage. The dissertation represents the results of independent and original research. A manuscript that describes the research and that is suitable for publication in a refereed journal should be presented simultaneously with the dissertation. Degree requirements also include a final oral examination, mainly in defense of the dissertation.

#### **Ph.D. in Pharmaceutical Sciences, Emphasis in Pharmacy Administration**

Description: The Department of Pharmacy Administration prepares graduates to be social and behavioral scientists who apply and develop theories to understand aspects of the health care arena and its participants. Examples of specific areas of inquiry include the marketing and economics of pharmaceuticals, patient and provider behaviors in the health care system, management strategies within health systems, the health outcomes associated with using pharmaceuticals, and the roles of pharmacists in delivering and managing health care. This scientific discipline is particularly interested in how these areas are influenced by pharmacists and other health care providers, pharmaceutical manufacturers, governmental entities, and pharmaceuticals.

A graduate degree in pharmacy administration affords excellent career opportunities in a variety of settings. The graduate program has maintained an exceptional track record in placing graduates. Graduates of the program have obtained positions in academia, the pharmaceutical industry, managed care organizations, professional associations, consulting and marketing research firms, government agencies, hospitals, and health care journal publication agencies. In academia, the program has produced several chairs of pharmacy administration departments and deans of pharmacy schools nationwide. In the pharmaceutical industry, many alumni have quickly risen to senior management positions in marketing, health/pharmaceutical economics, and pharmacy affairs. Other graduates of the program have secured key positions in the federal and state governments, and professional associations in pharmacy.

Admission Requirements: application deadline, February 1. Applicants must have a B.S. degree in pharmacy, a B.S. degree in pharmaceutical sciences, or higher. (A degree in a discipline related to marketing, management, economics, or other health-related field may also be considered for admission upon demonstration of a commitment to pursuing a career in the field of pharmacy or the pharmaceutical industry.) College transcripts with a minimum of a B average (3.0 on a 4.0 scale) are required. Applicants must take and submit the scores from either the GRE or the GMAT. International applicants also must take the TOEFL examination and score at least 600 (paper-based test), 100 on the Internet-based test, or 250 on the computer-based test. Three letters of recommendation, an interview, a resume, and a statement of purpose are used to evaluate candidates.

If an applicant has a master's degree, he or she may petition in writing to the department chair for transfer, substitution, or waiver of certain courses upon entry into the program. The faculty will evaluate the request, following the Graduate School policies, and determine which courses, if any, can be waived or substituted. If an applicant has completed a thesis, he or she is asked to provide a copy of the thesis for review to determine whether waiver of certain courses is acceptable. Substitution or waiver of courses will then be documented on the student's progression form.

#### **Goals/Mission Statement**

Program Objectives: The graduate program in pharmacy administration has the following objectives for its graduate program:

- To prepare highly qualified graduate students for careers in academia, industry, and other settings with training in management, marketing, and economics of pharmaceuticals and pharmacy practice
- To maintain highly productive teaching and research programs that facilitate the acquisition of abilities necessary to create new knowledge

- To maintain a leadership role in state and national organizations relevant to the discipline
- To provide consultative services to pharmacists, the pharmaceutical industry, and other interested entities in the areas of faculty and graduate student expertise

Course Requirements: The Ph.D. in pharmaceutical sciences with an emphasis in pharmacy administration offers three areas of specialization: management, marketing, or outcomes. The course requirements are dictated by the specialization and are described below in separate sections.

Core Courses (30 hours of credit)

Psy 603/Edrs 501/Soc 501 (Statistics)

Phad 579-Primary Data Techniques

Phad 688-Research Methods in Pharmacy Administration

Phad 689-Pharmaceutical and Healthcare Policy

Phad 693-Health Economics

Phad 687-Secondary Data Techniques

Phad 680-General Linear Models

Phad 681-Applied Multivariate Analysis

Mktg 669-Theoretical Foundations of Marketing

Phad 692-Drug Development and Marketing or Phad 683-Advanced Pharmaceutical Marketing and Patient Behavior

Electives (9 credits): Non-required 600- or 700-level Phad or non-Phad courses approved by adviser

Nonthesis Research (6 credits): Phad 698

Emphasis Area

The Ph.D. in pharmaceutical sciences with an emphasis in pharmacy administration offers three areas of specialization: management, marketing, or outcomes. Students select one area of specialization and then complete the course requirements as described below.

Marketing Track (12 hours)

Mktg 650-Marketing Management

Mktg 670-Consumer Behavior

Bus 668-Customer Relationship Management

Phad 692-Drug Development and Marketing or Phad 683-Advanced Pharmaceutical Marketing and Patient Behavior

Management Track (12 hours)

Mgmt 672-Seminar in Global Business Strategy

Mgmt 673-Seminar in Human Resources Management

Mgmt 676-Seminar in Organizational Behavior

Mgmt 679-Seminar on the History of Management Thought

Outcomes Track (12 hours)

Phad 694-Pharmacoeconomics

Phad 696-Pharmacoepidemiology

Econ 607-Econometrics

HP 646-Introduction to Epidemiology

Other Academic Requirements: In addition to the course requirements, each student must participate and complete an orientation to the discipline of pharmacy administration and register for a departmental seminar (Phad 543/544) each semester (1 credit hour per semester). Each student must pass a

comprehensive examination, prepare and successfully defend a dissertation prospectus, and complete and defend his/her dissertation project, which is based on original, independent research.

\*\*It is important to note that if an applicant has a master's degree, he or she may petition in writing to the department chair for transfer, substitution, or waiver of certain courses upon entry into the program. The faculty will evaluate the request, following the Graduate School policies, and determine which courses, if any, can be waived or substituted. If an applicant has completed a thesis, he or she is asked to provide a copy of the thesis for review to determine whether waiver of nonthesis research and other courses is acceptable. Substitution or waiver of courses will then be documented on the student's progression form.

### **Medicinal Chemistry-Medc**

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Professor Stephen J. Cutler, chair • 417A Faser Hall

[http://www.olemiss.edu/depts/pharmacy/medicinal\\_chemistry/](http://www.olemiss.edu/depts/pharmacy/medicinal_chemistry/)

**501. ADVANCED MEDICINAL CHEMISTRY I.** Advanced study of organic medicinal agents with emphasis on names, synthesis, chemical properties, and pharmacological properties. Readings in the current literature required. (3)

**502. ADVANCED MEDICINAL CHEMISTRY II.** Continuation of Medicinal Chemistry 501. Readings in the current literature required. Prerequisite requirements for this course may also be satisfied by consent of department. Prerequisite: Medc 501 with minimum grade of C. (3)

**503. MEDICINAL CHEMISTRY RESEARCH METHODOLOGY.** A hands-on introduction to the practical aspects of the chemical methodology necessary to conduct medicinal chemistry research, including separation and purification technology, spectroscopic techniques, and medicinal chemistry literature searching. (3)

**507. ORGANIC CHEMISTRY OF DRUG SYNTHESIS.** Discussion of the synthetic approaches to many of the therapeutic classes of drugs studied in medicinal chemistry courses with an accent on the relationship of chemical structure to improved efficacy. Prerequisite requirements for this course may also be satisfied by consent of department. Prerequisite: Medc 501 with minimum grade of C. (3)

**541. PROBLEMS IN MEDICINAL CHEMISTRY.** Investigation of individual problems. (1-4)

**542. PROBLEMS IN MEDICINAL CHEMISTRY.** Investigation of individual problems. (1-4)

**543. SEMINAR ON CURRENT MEDICINAL CHEM TOPICS.** A seminar consisting of presentations by faculty, graduate students, B.S. in Pharmaceutical Science/medicinal chemistry track students and invited speakers. Taken by students presenting seminars during the fall semester. (1)

**544. SEMINAR ON CURRENT MEDICINAL CHEM TOPICS.** A seminar consisting of presentations by faculty, graduate students, B.S. in Pharmaceutical Science/medicinal chemistry track students and invited speakers. Taken by students presenting seminars during the spring semester. (1)

**609. DRUG ACTION & DESIGN V: HETEROCYCLIC COM.** Methods of synthesis of medicinally important compounds, which contain a heterocyclic ring system. (3)

**610. SELECTED TOPICS IN MEDICINAL CHEMISTRY.** Recent advances emphasizing mechanisms of drug action and other new concepts. (May be repeated for credit). (3)

**611. DRUG ACTION & DESIGN I: INTRO TO COM-AID.** Modern molecular modeling methods and techniques pertinent to molecular design and the simulation of molecular properties and interactions. Examples include modeling of small molecules at the level of mechanics calculations up to ab initio calculations; homology modeling of proteins and related validation methods; docking interactions of ligands and receptors. (3)

**612. DRUG ACTION & DESIGN II: QUANTIT STRUCT-.** Introduction to simple mathematical models of drug action (2D-QSAR) and application of the concepts to the use of computer-aided drug design to develop 3D pharmacophore models based on quantitative structure-activity relationships (3D-QSAR). (3)

- 613. DRUG ACTION & DESIGN III: DRUGS AFFECTIN.** Discussion and application of the design, synthesis, and biological activities of drugs affecting both the central and peripheral nervous system. (3)
- 614. DRUG ACTION & DESIGN IV: CHEMOTHERAPY OF.** Overview of anticancer, antimicrobial and antiviral chemotherapy as related to drug design, chemical syntheses, structural classes, mechanisms of pharmacological action, toxicities, resistance mechanisms and clinical usefulness. (3)
- 618. DRUG ACTION & DESIGN VI: BIOORGANIC CHEM.** The study of the chemical interactions and catalytic strategies fundamental to drug design and development, using the principles of organic chemistry as the intellectual framework for addressing biological problems at the molecular level. (3)
- 620. DRUG ACTION & DESIGN VII: COMBINATORIAL.** Parallel synthesis and product analysis sequel to molecular modeling and QSAR. (3)
- 621. THEORY OF TECHNOLOGY DEVELOPMENT.** Examination of the theory, practice, implications, and history of technological innovation. (3)
- 622. EARLY STAGES OF TECHNOLOGY DEVELOPMENT.** Examination of the processes for managing the early stages of innovation through balancing marketing, manufacturing, research, financials, intellectual property, and regulatory affairs. (3)
- 623. FOSTERING CREATIVE ENVIRONMENTS.** How to develop technologically creative ideas, understand the factors that influence creativity, develop methods for promoting creativity in others, and form a creative environment that attracts creative people. (3)
- 625. APPLIED IGERT PROBLEMS.** A capstone course challenging the students in creative problem solving, focusing on the student's research innovation and technological development of their primary research projects that are integrated with the USM School of Polymers and Higher Performance Materials. Z grade. (3)
- 630. PHARMACEUTICAL PROTEIN DESIGN & DEVEL.** This course focuses on the chemical and structural characteristics of protein pharmaceuticals, which make them different from conventional pharmaceutical products. (3)
- 643. SEMINAR ON CURRENT MEDICINAL CHEM TOPICS.** A seminar consisting of presentations by faculty, graduate students, B.S. in Pharmaceutical Science/medicinal chemistry track students and invited speakers. Taken by students not presenting seminars during the fall semester. Z grade. (1)
- 644. SEMINAR ON CURRENT MEDICINAL CHEM TOPICS.** A seminar consisting of presentations by faculty, graduate students, B.S. in Pharmaceutical Science/medicinal chemistry track students and invited speakers. Taken by students not presenting seminars during the spring semester. Z grade. (1)
- 697. THESIS.** No grade. (1-12)
- 797. DISSERTATION.** No grade. (1-18)

### **Pharmaceutics-Phar**

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Associate Professor Michael A. Repka, chair • 113 Faser Hall

<http://www.pharmacy.olemiss.edu/pharmaceutics/>

- 541. PROBLEMS IN PHARMACEUTICS.** Investigation of individual problems of current interest in pharmaceutics. (1-3)
- 542. PROBLEMS IN PHARMACEUTICS.** Investigation of individual problems of current interest in pharmaceutics. (1-3)
- 543. SEMINAR IN CURRENT PHARM. TOPICS.** (1)
- 544. SEMINAR IN CURRENT PHARM. TOPICS.** (1)
- 547. VETERINARY PHARMACEUTICALS.** Physiological action, preparation, and dosage of remedial and preventive agents used in the treatment of domestic animals. Prerequisite: Phcl 443 with minimum grade of C. (3)

- 630. PHARM. PROTEIN DESIGN AND DEVELOPMENT.** This course focuses on the chemical and structural characteristics of protein pharmaceuticals that make them different from conventional pharmaceutical products. (3)
- 635. ANALYTICAL PHARMACEUTICS.** The course is designed to teach the basic analytical pharmaceuticals techniques necessary to analyze drugs and dosage forms. Prerequisite requirements may also be satisfied by consent of instructor. Prerequisite: Phar 332 with minimum grade of C. (3)
- 641. ADVANCED PHARMACEUTICS.** Ionic equilibria, solubility theory and mass transport as applied to pharmaceutical systems. (4)
- 644. STABILITY OF PHARMACEUTICAL SYSTEMS.** Principles of chemical and physical stability as applied to pharmaceutical systems. (3)
- 649. PRODUCT DEVELOPMENT.** Problems involved in the development of successful formulas for medicinal products. Prerequisite: Phar 641 with minimum grade of C, Phar 642 with minimum grade of C. (3)
- 650. APPLIED PHARMACEUTICS.** The course combines theory with practical applications. Emphasis is placed on solving problems that occur during product development in the pharmaceutical industry. (2)
- 654. SPECIAL PROBLEMS IN BIOPHARMACEUTICS.** Individual biopharmaceutical problems treating physical and chemical properties of drugs and drug systems as they relate to drug transport systems in vivo. Prerequisite: Phar 641 with minimum grade of C, Phar 642 with minimum grade of C. (3)
- 660. ADVANCED PHARMACOKINETICS.** A comprehensive study of the time course of drug absorption, distribution, metabolism, and excretion, and the relationship of these processes to the intensity and time course of pharmacologic effects of drugs and chemicals. Prerequisite requirements may also be satisfied by consent of instructor. Prerequisite: Phar 642 with minimum grade of C. (3)
- 697. THESIS.** No grade. (1-12)
- 797. DISSERTATION.** No grade. (1-12)

### **Pharmacognosy-Phcg**

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Professor Daneel Ferreira, chair • 443 Faser Hall

<http://www.pharmacy.olemiss.edu/pharmacognosy/>

- 541. PROBLEMS IN PHARMACOGNOSY.** Individual investigation of problems of current interest in pharmacognosy. (1-4)
- 542. PROBLEMS IN PHARMACOGNOSY.** Individual investigation of problems of current interest in pharmacognosy. (1-4)
- 543. SEMINAR IN NATURAL PRODUCTS CHEMISTRY.** (1-4)
- 544. SEMINAR IN NATURAL PRODUCTS CHEMISTRY.** (1)
- 545. INDIVIDUAL STUDY IN PHARMACOGNOSY RES.** Individual readings, discussions, and presentations of research literature in natural products chemistry. Z grade. (1-6)
- 546. INDIVIDUAL STUDY IN PHARMACOGNOSY RES.** Individual readings, discussions, and presentations of research literature in natural products chemistry. Z grade. (1-6)
- 620. SELECTED TOPICS IN PHARMACOGNOSY.** An in-depth discussion of recent advances in knowledge of plant and animal materials with biological properties of interest to pharmaceutical scientists. (May be repeated once for credit). (3)
- 627. NATURAL PRODUCT CHEMISTRY.** A comprehensive consideration of the chemistry and pharmacology of those natural product constituents important because of their biological activity. Included are the broad classes, the alkaloids, the terpenoids, the steroids, the flavanoids, and other related groups. (3)
- 628. NATURAL PRODUCT CHEMISTRY.** A comprehensive consideration of the chemistry and pharmacology of those natural product constituents important because of their biological activity. Included are the broad classes, the alkaloids, the terpenoids, the steroids, the flavanoids, and other related groups. (3)

- 631. ANALYSIS OF NATURAL PRODUCT DRUGS I.** A discussion of techniques used for identification and determination of structure of substances of natural origin. Included for discussion are isolation techniques, chromatographic techniques, and micro techniques. (3)
- 632. ANALYSIS OF NATURAL PRODUCT DRUGS II.** A discussion of techniques used for identification and determination of structure of substances of natural origin. Included for discussion are physical methods and spectroscopic techniques of structure elucidation. (3)
- 633. ANALYSIS OF NATURAL PRODUCT DRUGS III.** A discussion of Fourier-transform nuclear magnet resonance techniques, including 2D-NMR for the determination of structure of substances of natural origin. Prerequisite: Phcg 632 with minimum grade of C. (3)
- 634. BIOSYNTHESIS OF PLANT CONSTITUENTS.** A study of the biosynthetic pathways producing physiologically active products found in natural sources. (3)
- 635. INTRODUCTION TO MOLECULAR CELL BIOLOGY.** We will discuss the internal organization of mammalian cells and how they function, common methodologies utilized to investigate signaling pathways, and their applications in the discovery of natural product-based drugs and/or molecular probes. Prerequisite: Bisc 440 or Chem 471 or Chem 473. (3-4)
- 636. FERMENTATION CHEMISTRY.** Chemical aspects of the production of pharmaceutically and economically important substances by microorganisms. (3)
- 643. SEMINAR IN NATURAL PRODUCTS CHEMISTRY.** Z grade. (1)
- 644. SEMINAR IN NATURAL PRODUCTS CHEMISTRY.** Z grade. (1)
- 697. THESIS.** No grade. (1-12)
- 797. DISSERTATION.** No grade. (1-18)

### **Pharmacology-Phcl**

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Professor Anthony Verlangieri, chair • 303 Faser Hall

<http://www.pharmacy.olemiss.edu/pharmacology/>

- 501. PRINCIPLES OF LIFE SCIENCE RESEARCH.** This course consists of facilitated discussions of different topics. Students will be assigned as discussion facilitators for one or two topics. Student facilitators will be responsible for preparing a synopsis of the discussion for distribution to the class and for grading purposes. Grading will be 50 percent based on the discussion facilitation and write-up and 50 percent based on participation in other discussions. (1)
- 503. LAB METH IN PHARMACOLOGY & TOXICOLOGY I.** Fundamental laboratory exercises designed to provide the student with hands-on experience with techniques basic to the disciplines of pharmacology and toxicology. (2)
- 504. LAB METH IN PHARMACOLOGY & TOXICOLOGY II.** Fundamental laboratory exercises designed to provide the student with hands-on experience with techniques basic to the disciplines of pharmacology and toxicology. Prerequisite: Phcl 503 with minimum grade of C. (2)
- 505. MODERN PHCL: NOVEL DRUGS CLINICAL TRIALS.** An in-depth discussion of topics of current importance in pharmacology of commonly occurring diseases are emphasized. Prerequisite: Instructor Approval Required. (2)
- 541. PROBLEMS IN PHARMACOLOGY.** Investigation of individual problems. (May be repeated for credit). (1-3)
- 547. INTRODUCTION TO ENVIRONMENTAL TOXICOLOGY.** Introduction to chemical nature and reactions of toxic substances, their origins and uses; and aspects of exposure, transformation, and elimination. (2)
- 563. INTRODUCTORY PHARMACOLOGY I.** General principles of pharmacodynamics; drugs affecting the autonomic nervous system and those organs innervated by that system. Prerequisite requirements for this course may also be satisfied by equivalent course work as approved by the department



or by consent of instructor. Prerequisite: Phcl 361 with minimum grade of C, Phcl 362 with minimum grade of C, Phcl 373 with minimum grade of C. (4)

**564. INTRODUCTORY PHARMACOLOGY II.** Continuation of 563; autonomic, cardiovascular, and renal drugs; endocrinological and chemotherapeutic agents. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Phcl 563 with minimum grade of C. (4)

**569. DRUG ABUSE EDUCATION.** Pharmacological, legal, and socio-psychological aspects of drug abuse. Z grade. (3)

**581. INTRODUCTION TO TOXICOLOGY.** Course provides an introduction to the principles of toxicology. (3)

**586. RECEPTORS AND CHANNELS.** The course will cover aspects of cell signaling and membrane biophysics focused on inter and intracellular communication. Research techniques as well as classical and recent works will be discussed. (3)

**611. TEACHING IN PHARMACOLOGY AND TOXICOLOGY.** Graduate students will be carefully monitored in their teaching activities in undergraduate pharmacy courses. Z grade. (1)

**612. TEACHING IN PHARMACOLOGY AND TOXICOLOGY.** Graduate students will be carefully mentored in their teaching activities in undergraduate pharmacy courses. Z grade. (1)

**641. UNIFIED LAB IN PHARM, TOX & PHYS CHEM.** Unified laboratory in pharmacology, toxicology, and physiological chemistry. Fundamental experiments illustrating concepts common to the three disciplines; both in vivo and in vitro techniques will be utilized. (2)

**642. UNIFIED LAB IN PHARM, TOX & PHYS CHEM.** Unified laboratory in pharmacology, toxicology, and physiological chemistry. Fundamental experiments illustrating concepts common to the three disciplines; both in vivo and in vitro techniques will be utilized. (2)

**643. SEMINAR: CURR TOPICS IN PHARM & TOX.** Z grade. (1)

**651. DIRECTED STUDIES IN PHARM AND TOX.** Research tutorials requiring individual conferences, literature assignments, and laboratory experiences with departmental faculty members. (1)

**652. DIRECTED STUDIES IN PHARM AND TOX.** Research tutorials requiring individual conferences, literature assignments, and laboratory experiences with departmental faculty members. Z grade. (1)

**661. ADVANCED PHYSIOLOGY.** Physiology of those systems, organs, and physiological mechanisms of special significance to pharmacology, including a comparative cross-species emphasis for selected organ systems. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Phcl 361 with minimum grade of C, Phcl 362 with minimum grade of C, Phcl 363 with minimum grade of C, Phcl 364 with minimum grade of C. (4)

**662. ADVANCED PHYSIOLOGY.** Physiology of those systems, organs, and physiological mechanisms of special significance to pharmacology, including a comparative cross-species emphasis for selected organ systems. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Phcl 361 with minimum grade of C, Phcl 362 with minimum grade of C, Phcl 363 with minimum grade of C, Phcl 364 with minimum grade of C. (4)

**663. GENERAL PHARMACOLOGY I.** Fundamentals of pharmacokinetic, pharmacodynamic, and receptor selectivity of various classes of biologically active agents. (3)

**665. HUMAN NEUROBIOLOGY.** Review of the neuroanatomical, neurophysiological, and neurochemical substances upon which centrally acting drugs and toxicants may act. (4)

**668. EXTERNSHIP IN PHARMACOLOGY.** Credit given for participation in pharmacological screening procedures carried out in the laboratories of a pharmaceutical manufacturer. Z grade. (1-8)

**669. PHYSIOLOGICAL CHEMISTRY.** Carbohydrate, protein, and nucleic acid structure and function, enzyme catalysis, intermediary metabolism, biochemical endocrinology, membrane structure, mechanisms of solute transport, and molecular genetics. (4)

**675. GEN PRINC OF PHARMACOLOGY & TOXICOLOGY I.** General principles of pharmacology and toxicology; biotransformation of toxicants; chemical carcinogenesis, mutagenesis, teratogenesis;

receptors and signaling pathways. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Phcl 669 with minimum grade of C. (4)

**676. GEN PRINC - PHARMACOLOGY & TOXICOLOGY II.** General principles of pharmacology and toxicology, drug toxicology, organ systems, risk assessment, environmental toxicants. Prerequisite requirements for this course may also be satisfied by consent of instructor. (4)

**677. ADVANCED TOPICS.** Lectures, readings, and discussions of special areas of experimental pharmacology and allied subjects. (May be repeated for credit). (2)

**679. METHODS IN PHARMACOLOGY AND TOXICOLOGY.** Emphasis on the quantification of toxic responses of chemical origin. Use of toxicology in the regulatory process; principles and methods for acute and chronic toxicity; biochemical methods for reassessing organ function; reproductive toxicity testing; risk assessment of chemical hazards. (Lecture and laboratory). (4)

**681. SEL TOPICS - PHARMACOLOGY AND TOXICOLOGY.** Topics may include pharmacokinetic, pharmacodynamic, and receptor selectivity of biologically active agents, food additives, drug toxicity, toxicology of agricultural and industrial chemicals, clinical toxicology, toxicity of plastics; naturally occurring toxins. Prerequisite: Instructor Approval Required. (2)

**685. EXTERNSHIP IN TOXICOLOGY.** Credit given for research performed in toxicology at other academic institutions or private industrial concerns. Z grade. (1-8)

**697. THESIS.** No grade. (1-12)

**797. DISSERTATION.** No grade. (1-12)

### **Pharmacy Administration-Phad**

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Professor Donna S. West Strum, chair • 223 Faser Hall

<http://www.pharmacy.olemiss.edu/phad/>

**541. PROBLEMS IN PHARMACY ADMINISTRATION.** Investigation of individual problems. (1-6)

**542. PROBLEMS IN PHARMACY ADMINISTRATION.** Investigation of individual problems. (1-6)

**543. SEMINAR IN CURRENT HEALTH TOPICS.** Pharmacy administration departmental seminar. (1)

**544. SEMINAR IN CURRENT HEALTH TOPICS.** Pharmacy administration departmental seminar. Z grade. (1)

**579. PRIMARY DATA TECHNIQUES.** An overview of the primary research techniques used in executing research projects related to pharmaceutical marketing and/or pharmacy management. Included are sampling, instrument development, and data collection using several personal interview and self-administered survey techniques. Prerequisite requirements for this course may also be satisfied by consent of instructor. Prerequisite: Phad 688 with minimum grade of C. (3)

**597. MEDICAL ANTHROPOLOGY.** Social factors in health and illness. Social influences on need, demand, provision, and compliance with medical care. (3)

**599. HEALTH CARE AND CONTEMPORARY SOCIETY.** Development, current organization, and financing of the contemporary health care system in the United States from a comparative perspective. Specific topics include provider socialization, provider-consumer interaction, health care as an industry, and the health care system of the future. (3)

**661. EPIDEMIOLOGY AND HEALTH DATA MANAGEMENT.** Methods and techniques of health data collection with emphasis on use in health planning. (3)

**674. RESEARCH IN PHARMACY ADMINISTRATION.** Investigation of individual problems. (1-3)

**675. HEALTH AGENCY ADMINISTRATION.** Structured, supervised experience in health care agencies. Z grade. (1-3)

**680. GENERAL LINEAR MODELS.** An intermediate-level course in regression analysis methods covering the basic theory and application of the general linear model (GLM) to conduct relevant analyses. Simple and multiple linear regression are extensively covered as well as a number of procedures falling under the general category of analysis of variance (ANOVA). (3)

- 681. APPLIED MULTIVARIATE ANALYSIS.** An intermediate-level course examining techniques generally considered to be multivariate in nature or having a multivariate approach to analyzing data (e.g., multivariate analysis of variance, repeated-measures analysis of variance, discriminant analysis, logistic regression, cluster analysis, and factor analysis). Prerequisite: Phad 680 with minimum grade of C. (3)
- 683. ADV PHARMACEUTICAL MKTING & PATIENT BEHA.** Doctoral seminar exploring the factors affecting acceptance, distribution, promotion, and economics of pharmaceutical marketing and the theoretical perspectives in understanding behavior in the medication use process. (3)
- 687. SECONDARY DATA TECHNIQUES.** Techniques and principles useful in using secondary data to answer research questions, including data and data source evaluation, accessing and preparing secondary databases, and review of common data types and sources. (3)
- 688. RESEARCH METHODOLOGY AND TECHNIQUES.** An introduction to the research process from project inception to its conclusion. Students will be exposed to issues surrounding the establishment of the problem statement, hypothesis generation and testing, measurement, research design, sampling theory, data collection and analysis, and ethical conduct in research. (3)
- 689. PHARMACEUTICAL AND HEALTHCARE POLICY.** The delivery and financing of health care, pharmaceuticals and pharmacy services; development and implications of pharmaceutical and healthcare policies in the public and private sectors at the federal and state levels. (3)
- 690. DATA MANAGEMENT AND STATISTICAL SOFTWARE.** To introduce students to data management and provide a survey of statistical software. Prerequisite: Phad 688 with minimum grade of C. (3)
- 692. DRUG DEVELOPMENT AND MARKETING.** Insight into the administrative procedures involved in the developing and marketing of new pharmaceuticals, from discovery through market approval, including both industrial and policy perspectives. (3)
- 693. HEALTH ECONOMICS.** The financing and delivery of health care in the U.S., including economics of health care, economics of the U.S. health care system, and current policy issues including health care expenditures, health care reform, and economics of the uninsured. (3)
- 694. PHARMACOECONOMICS.** Principles and analytical techniques in assessing the overall value of pharmaceutical products, services, programs, and other health care interventions, including hands-on experience of pharmacoeconomic modeling. (3)
- 695. SPECIAL TOPICS IN PHARMACY ADMINISTRATION.** Course designed to cover special topics in pharmacy administration or health care administration in general that are not covered in regular courses and may be suitable for MS or PhD students in pharmacy administration or other related disciplines. Prerequisite: Instructor Approval Required. (1-3)
- 696. PHARMACOEPIDEMIOLOGY.** This graduate-level course is designed to familiarize students in pharmacy or other health care fields with the principles of pharmacoepidemiology. To this end, the course would provide a comprehensive review of research study designs used in the science of pharmacoepidemiology. It would also involve a discussion of primary literature that details case examples of drugs withdrawn from the United States (US) drug market due to adverse events. Prerequisite: Instructor Approval Required. (3)
- 697. THESIS.** No grade. (1-12)
- 698. NON-THESIS RESEARCH.** This course will provide students without prior research experience a chance to complete a research project, write a manuscript, and demonstrate their research skills before beginning the dissertation process. Prerequisite: Phad 688 with minimum grade of Z. (1-3)
- 797. DISSERTATION.** No grade. (1-18)

## **Administration, Faculty, and Staff**

### **ADMINISTRATION**

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**DANIEL W. JONES, M.D.**, chancellor

**MORRIS H. STOCKS, B.S., M.S., Ph.D.**, provost and vice chancellor for academic affairs

**JOHN Z. KISS, B.S., Ph.D.**, dean of the Graduate School

**CHRISTY M. WYANDT, B.A., Ph.D.**, associate dean of the Graduate School

### **GRADUATE COUNCIL**

---

**MARK DOLAN**, School of Journalism and New Media

**GARY GASTON**, College of Liberal Arts

**JEFFREY HALLAM**, School of Applied Sciences

**KRISTEN HYMEL**, graduate student

**MICHAEL HOFFHEIMER**, School of Law

**JEFFREY JACKSON**, College of Liberal Arts

**JOHN KISS**, Graduate School, ex officio

**TIMOTHY LETZRING**, School of Education

**THOMAS LOMBARDO**, Office of Research, ex officio

**LYNNE MURCHISON**, Outreach, ex officio

**DAVE NICHOLS**, School of Accountancy

**MICHAEL REPKA**, School of Pharmacy

**JULIA RHOLES**, University Libraries, ex officio

**JEFFREY ROUX**, School of Engineering

**WARREN STEEL**, College of Liberal Arts

**DOUGLAS VORHIES**, School of Business Administration

**MARGARET WALDEN**, Information Technology, ex officio

**CHRISTY WYANDT**, Graduate School, ex officio

### **GRADUATE SCHOOL STAFF**

---

**KEEGAN ARMSTRONG**, graduate admissions counselor

**CONNIE DEFAZIO**, senior secretary

**MICHELLE DICKSON**, administrative coordinator

**PAIGE DUKE**, student affairs administrator

**CANDACE OSWALT**, coordinator of records

**TAMEKA SMITH**, graduate admissions specialist

**VEDA TAYLOR**, graduate admissions specialist

**ROBIN WIEBE**, assistant to the dean

### **FULL-TIME FACULTY**

---

**MILAM W. AIKEN, B.S., M.B.A.** (University of Oklahoma-Norman Campus), **Ph.D.** (University of Arizona); chair and professor of management information systems

**AILEEN AJOOTIAN, M.A.** (University of Oregon), **M.A., Ph.D.** (Bryn Mawr College); chair of classics and professor of classics and art

**AHMED HAJMOHAMMAD-KHALIL AL-OSTAZ**, B.S., M.S. (King Fahd Univ. of Petroleum Minerals), Ph.D. (Michigan State University); professor of civil engineering

**IGNATIUS ADETAYO ALABI**, B.A. (Obafemi Awolowo University), M.A. (University of Ibadan), M.A. (University of Guelph), Ph.D. (University of Saskatchewan); associate professor of English

**ROBERT B. ALBRITTON**, B.A. (University of Alabama at Birmingham), M.A., Ph.D. (Northwestern University); professor emeritus of political science

**BAHRAM ALIDAEI**, B.S. (Tehran University), M.B.A. (University of North Texas), Ph.D. (University of Texas at Arlington); professor of production operations management and professor of pharmacy administration

**MICHAEL THOMAS ALLEN**, B.A. (University of North Carolina-Chapel Hill), M.A. (Appalachian State University), Ph.D. (University of Tennessee-Knoxville); chair and professor of psychology

**SUSAN C. ALLEN**, B.Ed. (McMurry University), M.S.W., Ph.D. (University of Texas at Arlington); associate professor of social work

**MUSTAFA SIDDIK ALTINAKAR**, B.S., M.S. (Middle East Technical University), M.S. (Federal Institute of Technology), Ph.D. (Lausanne University); director and professor of National Center for Computational Hydroscience and Engineering

**ANTHONY PAUL AMMETER**, B.S., M.B.A. (University of Manitoba), Ph.D. (University of Texas at Austin); associate dean for undergraduate programs and associate professor of management and management information systems

**AMALA DASS ANTONY SAMY**, B.S. (Madurai Kamaraj University), Ph.D. (University of Missouri-Rolla); assistant professor of chemistry and biochemistry

**GLEN S. ARCHIBALD**, B.S., M.A., Ph.D. (University of Houston); assistant professor of economics

**MELVIN S. ARRINGTON**, B.A. (Mississippi College), M.L.S., M.A., Ph.D. (University of Kentucky); professor of modern languages

**JEANNI ATKINS**, B.A. (Maryville College), M.A., Ph.D. (University of Missouri-Columbia); associate professor of journalism

**JOSEPH B. ATKINS**, B.A. (East Carolina University), M.A. (American University); professor of journalism

**JULIA A. AUBREY**, B.M., M.M., M.A. (University of Missouri-Columbia); associate professor of music

**BONNIE A. AVERY**, B.S., B.A. (Minot State University), Ph.D. (University of North Dakota); associate professor of pharmaceuticals and research associate professor in the Research Institute of Pharmaceutical Sciences

**MITCHELL A. AVERY**, B.S., Ph.D. (University of California-Santa Cruz); professor of medicinal chemistry, research professor in the Research Institute of Pharmaceutical Sciences and director of LADDS

**ADNAN AYDIN**, B.S., M.S. (Middle East Technical University), Ph.D. (Memorial University of Newfoundland); associate professor of geology

**BENJAMIN FRANKLIN BANAHAN**, B.S. (Louisiana State University-Baton Rouge), M.S., Ph.D. (The University of Mississippi); director, Center for Pharmaceutical Marketing and Management, research professor in the Research Institute of Pharmaceutical Sciences and professor of pharmacy administration

**DEBORAH E. BARKER**, B.A., M.A. (University of Oklahoma-Norman Campus), Ph.D. (Princeton University); associate professor of English

**ROBERT WILLIAM BARNARD**, B.S., M.A. (American University), Ph.D. (University of Memphis); associate professor of philosophy

**ROSUSAN D. BARTEE**, B.A. (Tougaloo College), M.A. (Northwestern University), Ph.D. (University of Illinois-Urbana Campus); professor of leadership and counselor education and program coordinator

**MARTHA ANN BASS**, B.S., M.S. (University of Utah), Ph.D. (University of Arkansas-Fayetteville); associate professor of health and exercise science

**KIM R. BEASON**, B.S. (College of the Ozarks), M.Ed., Ed.D. (University of Arkansas-Fayetteville); professor of park and recreation management and director of senior aquatics therapy program

**MICHAEL T. BELONGIA**, B.A. (University of Wisconsin-Madison), M.S. (Virginia Polytechnic Institute and State), Ph.D. (North Carolina State University-Raleigh); Otho Smith Professor of Economics

**JOHN P. BENTLEY**, M.B.A. (Drake University), Ph.D., M.S. (The University of Mississippi); professor of pharmacy administration and research professor in the Research Institute of Pharmaceutical Sciences

**WILLIAM WELLS BERRY**, B.A. (University of Virginia), J.D. (Vanderbilt University); assistant professor of law

**MARK N. BING**, B.A. (University of Colorado at Boulder), M.S. (Villanova University), Ph.D. (University of Tennessee-Knoxville); associate professor of management

**JOE M. BLACKBOURN**, B.S. (Mississippi State University), M.S. (Central Missouri State University), Ph.D. (Mississippi State University); associate professor of special education

**SARAH E. BLACKWELL**, B.S. (Mississippi College), M.Ed., Ph.D. (The University of Mississippi); associate professor of elementary education

**ANNE K. BOMBA**, B.S., M.S., Ph.D. (Oklahoma State University); associate professor and graduate program director of nutrition and hospitality management

**LUCA BOMBELLI**, B.S. (Università degli Studi di Milano), M.S., Ph.D. (Syracuse University); associate professor of physics and astronomy

**ALICIA S. BOULDIN**, B.S., M.S., Ph.D. (The University of Mississippi); associate dean, outcome assess./learn. adv., professor of pharmacy administration and research professor in the Research Institute of Pharmaceutical Sciences

**KENDALL OWEN BOWLIN**, B.B.A. (University of Texas at Austin), M.A.C. (The University of Mississippi), Ph.D. (University of Texas at Austin); assistant professor of accountancy instruction

**NICHELLE CATRICE BOYD**, B.B.A., M.Ed., Ph.D. (The University of Mississippi); associate professor of curriculum and instruction

**JOHN S. BREWER**, B.A. (Hendrix College), M.S., Ph.D. (Louisiana State University-Baton Rouge); professor of biology

**ROBERT D. BROWN**, B.A., M.A. (Northern Illinois University), Ph.D. (Indiana University-Bloomington); professor of political science

**JOHN M. BRUCE**, B.S. (Texas A&M University), M.A., Ph.D. (Ohio State University); chair and associate professor of political science

**QINGYING BU**, B.S., M.S. (Harbin Institute of Technology), Ph.D. (Kentucky State University); associate professor of mathematics

**RICHARD BUCHHOLZ**, B.S., M.S., Ph.D. (University of Florida); associate professor of biology

**DENNIS A. BUNCH**, B.S. (Arkansas State University), M.A.E. (University of Arkansas-Fayetteville), Ph.D. (Vanderbilt University); assistant professor of leadership and counselor education

**CHARLES L. BURANDT**, B.S., M.S. (Stephen F. Austin State University), Ph.D. (Texas A&M University); research assistant professor in the National Center for Natural Products Research

**ALLISON PAIGE BURKETTE**, B.A. (Salem College), M.A. (University of North Carolina at Greensboro), Ph.D. (University of Georgia); assistant professor of modern languages

**RICKY BURKHEAD**, B.M. (Mississippi Valley State University), M.A. (Eastern Illinois University); associate professor of music

**VICTORIA BUSH**, B.B.A. (Texas A&M University), M.A. (Maryland Institute College of Art), Ph.D. (University of Memphis); professor of marketing

**GERARD J. BUSKES**, B.S., M.S., Ph.D. (Universiteit Nijmegen); professor of mathematics

**FONTAINE BUEL CAMPBELL**, B.A. (Mississippi College), M.S.W., Ed.D. (Louisiana State University-Baton Rouge); associate professor of social work

**JOE TURNER CANTU**, B.F.A., M.F.A. (Southern Methodist University); associate professor of theatre arts

**LEI CAO**, B.S. (Hefei University of Technology), M.S. (Univ. of Science and Technology Beijing), Ph.D. (University of Missouri-Columbia); associate professor of electrical engineering

**TERESA CARR CARITHERS**, B.S., M.S. (The University of Mississippi), Ph.D. (University of Mississippi Medical Center); interim associate dean of the School of Applied Sciences and professor of nutrition and hospitality

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**JUDITH CASSIDY**, B.A. (Tulane University of Louisiana), M.B.A. (University of Texas at Austin), Ph.D. (Texas Tech University); associate professor of accountancy

**MARCO CAVAGLIA**, M.S. (Universita degli Studi del Piemonte Oriè), Ph.D. (Scuola Internazionale Superiore de Stude); associate professor of physics and astronomy

**WALTER G. CHAMBLISS**, B.S., M.S., Ph.D. (The University of Mississippi); director of technology management, research professor of the Research Institute of Pharmaceutical Sciences and professor of pharmaceuticals

**YUNHEE CHANG**, B.S., M.S. (Seoul National University), Ph.D. (University of Illinois-Urbana Campus); associate professor of nutrition and hospitality management

**WILLIAM F. CHAPPELL**, B.A. (Jacksonville State University), Ph.D. (University of South Carolina-Columbia); associate professor of economics

**VIRGINIA ROUGON CHAVIS**, B.A. (The University of Mississippi), M.F.A. (Savannah College of Art and Design); interim chair and associate professor of art

**FAN CHEN**, B.S. (National Cheng-Kung University), M.B.A. (Thunderbird, the American Graduate School of International Management), M.S. (Boston College), Ph.D. (Louisiana State University-Baton Rouge); assistant professor of finance

**WEI-YIN CHEN**, M.S. (Polytechnic University), M.S. (SUNY Stony Brook), Ph.D. (City University); professor of chemical engineering

**YIXIN CHEN**, B.S. (Beijing Polytechnic University), M.S. (Tsinghua University), M.S., Ph.D. (University of Wyoming), Ph.D. (Pennsylvania State University); associate professor of computer and information science

**DEBORAH A. CHESSIN**, B.S., M.S. (Cornell University-Endowed Colleges), Ed.D. (The University of Mississippi); professor of curriculum and instruction and coordinator of service learning and study abroad

**LINDA F. CHITWOOD**, B.S., M.S. (Oklahoma State University), Ph.D. (Florida State University); interim associate provost for outreach and continuing studies and professor of exercise science

**KAREN ANN CHRISTOFF**, B.S. (University of Rochester), M.A. (SUNY at Buffalo), Ph.D. (West Virginia University); associate professor of psychology

**JAMES V. CIZDZIEL**, B.S. (SUNY at Buffalo), Ph.D. (University of Nevada-Reno); assistant professor of chemistry and biochemistry

**JOHN D. CLEARY**, B.S. (University of Missouri-Columbia), Pharm.D. (University of Iowa); professor of pharmacy practice and coordinator of research emeritus

**WALTER E. CLELAND**, B.S. (Miami University-Oxford Campus), Ph.D. (Michigan State University); assistant chair and associate professor of chemistry and biochemistry

**FELICE A. COLES**, B.A. (Louisiana State University-Baton Rouge), M.A. (University of Utah), Ph.D. (University of Texas at Austin); associate professor of modern languages

**JOHN R. CONLON**, B.A., Ph.D. (University of Chicago); professor of economics

**SUMALI CONLON**, B.A. (Thammasat University), M.S. (University of Nebraska at Kearney), Ph.D. (Illinois Institute of Technology); associate professor of management information systems

**ALICE H. COOPER**, B.A. (Oberlin College), M.A., Ph.D. (Harvard University); professor of political science

**BENJAMIN P. COOPER**, B.A. (Amherst College), J.D. (University of Chicago); assistant professor of law

**SAM COUSLEY**, B.S., M.B.A. (Mississippi State University), D.B.A. (Louisiana Tech University); clinical assistant professor of marketing

**ALETA LYNN CRAWFORD**, B.P.A., M.B.A. Ph.D. (Mississippi State University); clinical assistant professor of management

**LUCIEN M. CREMALDI**, B.S., M.S. (Louisiana State University-Baton Rouge), Ph.D. (Northwestern University); chair and professor of physics and astronomy

**BETTY J. CROUTHER**, B.S. (Jackson State University), M.F.A. (The University of Mississippi), Ph.D. (University of Missouri-Columbia); associate professor of art

**ROBERT E. CUMMINGS**, B.A. (University of Tennessee-Knoxville), M.A., Ph.D. (The University of Mississippi); director and associate professor of writing and rhetoric

**H. CONRAD CUNNINGHAM**, B.S. (Arkansas State University), M.S., D.S.C. (Washington University); chair and professor of computer and information science

**STEPHEN JOHN CUTLER**, B.S., Ph.D. (University of Georgia); chair and professor of medicinal chemistry, research professor in the Research Institute of Pharmaceutical Sciences and director of COBRE

**JOHN N. DAIGLE**, B.S. (Louisiana Tech University), M.S. (Virginia Polytechnic Institute and State), D.S.C. (Columbia University-New York City); professor of electrical engineering

**XIN DANG**, B.S. (Chongqing University), M.S., Ph.D. (University of Texas at Dallas); associate professor of mathematics

**ALAKABHA DATTA**, B.S. (University of Calcutta), M.S. (Delhi University), Ph.D. (University of Hawaii at Manoa); assistant professor of physics and astronomy

**GREGG R. DAVIDSON**, B.S. (Wheaton College), M.S., Ph.D. (University of Arizona); professor of geology and geological engineering

**DOUGLAS RAYMOND DAVIS**, B.S. (Southern Oregon State College), B.S. (Oregon State University), M.A.E., Ph.D. (Louisiana State University-Baton Rouge); associate professor of leadership and counselor education

**SAMUEL M. DAVIS**, B.A. (University of Southern Mississippi), J.D. (The University of Mississippi), LL.M. (University of Virginia); professor and Whitten chair of law and government

**STEVEN R. DAVIS**, B.S. (James Madison University), Ph.D. (University of Virginia); professor of chemistry and biochemistry

**WALTER D. DAVIS**, B.A., M.B.A. (Oklahoma State University), Ph.D. (Georgia Institute of Technology); associate professor of management

**HEATHER K. DAVISON**, B.S., M.S. Ph.D. (Tulane University of Louisiana); clinical assistant professor of management

**ELAINE B. DAY**, M.A., Ph.D. (University of Texas at Austin); associate professor of biology

**WILLIAM N. DEJOURNETT**, B.Ed. (Jacksonville State University), M.M. (Northern Illinois University), D.A. (The University of Mississippi); associate professor of music

**KIRSTEN A. DELLINGER**, B.A. (Rollins College), M.A., Ph.D. (University of Texas at Austin); chair of sociology and anthropology and associate professor of sociology

**WILLIAM J. DERRICK**, B.A. (Mississippi College), J.D. (The University of Mississippi); legal writing instructor and acting assistant professor of law

**THERON T. DEWEY**, B.A. (Illinois State University), M.A. (Southern Illinois University-Carbondale), Ph.D. (University of Wisconsin-Madison); associate professor of art

**YAN DING**, B.S., M.S. Ph.D. (Tsinghua University), Ph.D. (Chuo University); research associate professor

**OLIVER J. DINIUS**, M.A., Ph.D. (Harvard University); Croft associate professor of history

**ROBERT JOHN DOERKSEN**, B.S., Ph.D. (University of New Brunswick); associate professor of medicinal chemistry and research associate professor in the Research Institute of Pharmaceutical Sciences

**MARK KENNETH DOLAN**, M.A., Ph.D. (University of South Carolina-Columbia); associate professor of journalism and new media

**GEORGE WORLASI KWASI DOR**, B.M., M.P.H. (University of Ghana), Ph.D. (University of Pittsburgh); associate professor of music



**LEIGH DUCK**, B.A. (Rice University), M.A. (Southern Methodist University), Ph.D. (University of Chicago); associate professor of English

**NANCY MCKENZIE DUPONT**, B.A., M.A. (Loyola University in New Orleans), Ph.D. (University of Southern Mississippi); associate professor of journalism

**MICHAEL A. DUPPER**, B.S. (Manhattan College), M.S. (University of Wisconsin-Madison), Ed.D. (The University of Mississippi); assistant professor of health, exercise science and recreation management

**DONALD L. DYER**, B.A. (University of North Carolina-Chapel Hill), M.A., Ph.D. (University of Chicago); chair and professor of modern languages

**CHARLES W. EAGLES**, B.A. (Presbyterian College), M.A., Ph.D. (University of North Carolina-Chapel Hill); William F. Winter Professor of History

**GREGORY L. EASSON**, B.S. (Southwest Missouri State University West), M.S., Ph.D. (University of Missouri-Rolla); director, Mississippi Mineral Resources Institute and professor of geology and geological engineering

**DEX EDWARDS**, B.F.A., M.F.A. (The University of Mississippi); associate professor of theatre arts

**RICK ELAM**, B.S. (Culver-Stockton College), M.A., Ph.D. (University of Missouri-Columbia); professor of accountancy and Reynolds Professor of Accountancy

**ATEF Z. ELSHERBENI**, B.S., M.S., B.S. (Cairo University), Ph.D. (University of Manitoba); associate dean for research and graduate programs, director of micro systems laboratory, director of CAD laboratory and professor of electrical engineering

**MAHMOUD A. ELSOHLY**, B.A., M.S. (Cairo University), Ph.D. (University of Pittsburgh); research professor, NCNPR, and professor of pharmaceuticals

**ESIM ERDIM**, B.A., Ph.D. (Ankara University), Ph.D. (Kent State University); professor of modern languages

**ELIZABETH KAYE ERVIN**, B.S. (Tennessee Technological University), M.S. (Vanderbilt University), Ph.D. (Carnegie Mellon University); associate professor of civil engineering

**CHIARELLA ESPOSITO**, B.A. (SUNY Stony Brook), M.A. (SUNY at Buffalo), Ph.D. (SUNY Stony Brook); associate professor of history

**ROBBIE ETHRIDGE**, B.A., M.A. Ph.D. (University of Georgia); professor of anthropology

**BETH ANN FENNELLY**, B.A. (University of Notre Dame), M.F.A. (University of Arkansas-Fayetteville); associate professor of English

**JONATHAN BRIAN FENNO**, B.A. (Concordia College at Moorhead), M.A., Ph.D. (University of California-Los Angeles); associate professor of classics

**DANEEL FERREIRA**, B.S. (University of Pretoria), M.S., D.S.C. (University of the Orange Free State); chair and professor of pharmacognosy and research professor in the Research Institute of Pharmaceutical Sciences

**LESTER FIELD**, B.A. (Gonzaga University), M.A., Ph.D. (University of California-Los Angeles); professor of history

**ANN FISHER-WIRTH**, B.A. (Pomona College), M.A., Ph.D. (Claremont Graduate School); professor of English

**DALE L. FLESHER**, B.S., M.A. (Ball State University), Ph.D. (University of Cincinnati); associate dean, professor of accountancy and Arthur Andersen Lecturer

**TONYA KAY FLESHER**, B.S. (Ball State University), M.A. (Appalachian State University), Ph.D. (The University of Mississippi); professor of accountancy and Arthur Andersen Lecturer

**MARY ALLISON FORD-WADE**, B.S. (University of North Alabama), M.S. (Mississippi State University), Ph.D. (University of Arkansas-Fayetteville); associate professor of health, exercise science and recreation management

**ELLEN JOAN FOSTER**, B.S. (Texas Tech University), M.A. (Trinity University), Ph.D. (Texas State University-San Marcos); assistant professor of curriculum and instruction

**LAURDELLA FOULKES-LEVY**, B.M. (Westminster Choir College), M.M. (Northwestern University), Ph.D. (SUNY at Buffalo); associate professor of music

**TOMMY G. FRANKLIN**, B.A., M.A. (University of South Alabama), M.F.A. (University of Arkansas-Fayetteville); assistant professor of fiction writing

**DWIGHT D. FRINK**, B.S. (University of South Alabama), M.A., Ph.D. (University of Illinois-Urbana Campus); holder of the Self Chair and professor of management

**KATHLEEN PETRIE FULLER**, B.S. (University of Delaware), M.S., Ph.D. (Indiana University-Bloomington); associate professor of finance

**BART L. GARNER**, B.S. (University of California-Riverside), Ph.D. (The University of Mississippi); clinical assistant professor of management information systems and director of information technology services

**JOHN C. GARNER**, M.S., Ph.D. (Auburn University); assistant professor of exercise science

**GARY R. GASTON**, B.S., M.S. (The University of Alabama), Ph.D. (College of William and Mary); professor of biology

**CHARLES R. GATES**, B.M. (Louisiana State University-Baton Rouge), M.M., D.M.A. (Ohio State University); chair and professor of music

**LANE R. GAUTHIER**, B.S., M.A.E. Ph.D. (Louisiana State University-Baton Rouge); associate professor of curriculum and instruction

**JOSEPH RHEA GLADDEN**, B.S. (University of South Alabama), M.S. (University of Montana), Ph.D. (Pennsylvania State University); associate professor of physics and astronomy

**MURRELL GODFREY**, B.S. (Dillard University), Ph.D. (The University of Mississippi); associate professor and director of forensic chemistry

**PAUL M. GOGGANS**, B.E., M.S. Ph.D. (Auburn University); professor of electrical engineering

**RICHARD K. GORDON**, B.S. (Birmingham Southern College), M.S., Ph.D. (University of Illinois-Urbana Campus); associate professor of electrical engineering

**TAMAR GOULET**, B.S., M.S. (Tel-Aviv University), M.A. (Buffalo State College-SUNY), Ph.D. (SUNY at Buffalo); associate professor of biology

**CATHY A. GRACE**, B.A., M.S. (The University of Mississippi); lecturer in geology and geological engineering

**SUSAN GRAYZEL**, B.A. (Harvard University), M.A., Ph.D. (University of California-Berkeley); interim director of the Isom Center and professor of history

**CHRISTOPHER R. GREEN**, B.A. (Princeton University), J.D. (Yale University), Ph.D. (University of Notre Dame); associate professor of law

**ALAN M. GROSS**, B.A. (New York University), M.S., Ph.D. (Washington State University); professor of psychology and director of clinical training

**GANG GUO**, LL.B. (Institute of International Relations), M.A., Ph.D. (University of Rochester); Croft associate professor of political science

**ADAM STEFAN GUSSOW**, B.A. (Princeton University), M.A. (Columbia University-New York City), Ph.D. (Princeton University); associate professor of English and Southern studies

**SCOTT ALLEN GUSTAFSON**, M.A., Ph.D. (The University of Mississippi); instructional assistant professor and director of Psychological Services Center

**JOHN R. GUTIERREZ**, B.A., M.A. (New Mexico State University), Ph.D. (University of New Mexico); Croft professor of Spanish

**ROSS JAY HAENFLER**, B.A. (University of South Dakota), Ph.D. (University of Colorado at Boulder); associate professor of sociology

**JEFFREY S. HALLAM**, B.S., M.A., Ph.D. (Ohio State University); professor of health promotion and director of the Center for Health Behavior Research

**MARK T. HAMANN**, B.S. (Bemidji State University), Ph.D. (University of Hawaii at Manoa); professor of pharmacognosy, chemistry and biochemistry, and pharmacology and research professor in the Research Institute of Pharmaceutical Sciences

**RALPH HUGH HAMILTON**, M.B.A. (California State University-Fullerton), Ph.D. (University of Georgia); clinical assistant professor of management

**NATHAN I. HAMMER**, B.S., Ph.D. (University of Tennessee-Knoxville); assistant professor of chemistry and biochemistry

**LARRY G. HANSHAW**, B.S. (Tougaloo College), M.Ed. (University of Delaware), Ph.D. (University of Southern Mississippi); professor of secondary science education

**CAREY BLACKERBY HANSON**, B.A., M.F.A., M.A. (Utah State University); interim chair of theatre arts and associate professor of costume design

**JAIME LYNN HARKER**, B.A., M.A. (Brigham Young University), Ph.D. (Temple University); associate professor of English

**MICHAEL HARVEY**, B.B.A., M.B.A. (Southern Methodist University), M.S., Ph.D. (University of Arizona); Distinguished Chair of Global Business and professor of management

**DELVIN D. HAWLEY**, B.S., M.B.A., Ph.D. (Michigan State University); senior associate dean and associate professor of finance

**MARY ELIZABETH HAYES**, B.A. (Dartmouth College), Ph.D. (University of Iowa); associate professor of English

**GREGORY G. HEYWORTH**, B.A. (Columbia University-New York City), B.A. (Cambridge University), Ph.D. (Princeton University); associate professor of English

**CAROLYN WILES HIGDON**, B.S., M.A. (Kent State University), Ph.D. (University of Georgia); professor of communication sciences and disorders

**MATTHEW DAVID HILL**, B.S. (Arkansas State University), Ph.D. (Mississippi State University); J. Ed Turner Chair of Real Estate and assistant professor of finance

**JASON DALE HOEKSEMA**, B.S. (University of Michigan-Flint), Ph.D. (University of California-Davis); assistant professor of biology

**MARJORIE M. HOLLAND**, B.A. (Connecticut College), M.A. (Smith College), Ph.D. (University of Massachusetts at Amherst); professor of biology

**THEDFORD K. HOLLIS**, B.A. (Huntingdon College), Ph.D. (University of Chicago); associate professor of chemistry and biochemistry

**ERIN RENEE HOLMES**, M.S., Ph.D. (The University of Mississippi); assistant professor of pharmacy administration and research assistant professor in the Research Institute of Pharmaceutical Sciences

**KERRY P. HOLMES**, B.A. (San Jose State University), M.Ed., Ed.D. (The University of Mississippi); associate professor of elementary education

**ROBERT M. HOLT**, B.S. (South Dakota School of Mines and Technology), M.S. (University of Texas at El Paso), Ph.D. (New Mexico Institute of Mining and Technology); associate professor of geology

**IAN HOMINICK**, B.M. (Mount Allison University), M.M. (Bowling Green State University), D.M. (Ohio State University); associate professor of music

**JOSHUA H. HOWARD**, B.A. (Oberlin College), M.A., Ph.D. (University of California-Berkeley); Croft associate professor of history

**CHARLES D. HUFFORD**, B.S., Ph.D. (Ohio State University); associate dean of research and graduate programs, professor of pharmacognosy and research professor in the Research Institute of Pharmaceutical Sciences

**SAMIR A. HUSNI**, B.A. (Lebanese University), M.A. (University of North Texas), Ph.D. (University of Missouri-Columbia); professor of journalism, Hederman Lecturer and director, Magazine Innovation Center

**CHARLES L. HUSSEY**, B.S., Ph.D. (The University of Mississippi); chair and professor of chemistry and biochemistry

**WINN E. HUTCHCRAFT**, B.S., M.S. Ph.D. (The University of Mississippi); associate professor of electrical engineering

**MUHAMMAD ILIAS**, B.S., M.S. (University of Dhaka), Ph.D. (Strathclyde College); research professor in the National Center for Natural Products Research

**CHARLES ARTHUR INGENE**, M.A., Ph.D. (Brown University); Distinguished Chair of Business Administration and professor of marketing

**ROSEMARY OLIPHANT INGHAM**, B.S. (Western Kentucky University), M.Ed. (The University of Mississippi), Ed.D. (University of Houston); professor of curriculum and instruction and coordinator of secondary education

**LENNETTE J. IVY**, B.S. (Mississippi Valley State University), M.S. (The University of Mississippi), Ph.D. (University of Memphis); chair and associate professor of communication sciences and disorders

**COLIN R. JACKSON**, B.S. (University of Salford), M.S. (University of Toledo), Ph.D. (The University of Alabama); associate professor of biology

**JEFFREY T. JACKSON**, B.S. (University of Wisconsin-Madison), M.A., Ph.D. (University of Texas at Austin); associate professor of sociology

**PHILIP R. JACKSON**, B.F.A. (Columbus College of Art and Design), M.F.A. (Bowling Green State University); assistant professor of art

**MIKA B. JEKABSONS**, B.S. (Humboldt State University), Ph.D. (University of California-Davis); associate professor of biology

**CARL JULIUS JENSEN**, B.S. (United States Naval Academy), M.A. (Kent State University), Ph.D. (University of Maryland-College Park); assistant professor of criminal justice and director of the Center for Intelligence and Security Studies

**YAFEI JIA**, B.S. (Peking University), M.S. (Institute of Geography CAS), Ph.D. (University of Manchester); associate director of basic research and research professor of computational hydroscience and engineering

**SEONG BONG JO**, B.S., M.S. (Seoul National University), Ph.D. (Purdue University); associate professor of pharmaceuticals and research associate professor in Research Institute of Pharmaceutical Sciences

**JAY K. JOHNSON**, B.S. (Florida State University), M.A., Ph.D. (Southern Illinois University-Carbondale); professor of anthropology and director of Archaeological Research Center of Sociology and Anthropology

**KIRK ANTHONY JOHNSON**, B.A. (Duke University), M.S. (Washington University), M.A., Ph.D. (University of Illinois-Urbana Campus); associate professor of African-American studies

**LAURA RENEE JOHNSON**, B.A. (The University of Mississippi), M.A., Ph.D. (University of Louisville); associate professor of psychology

**BRADLEY W. JONES**, B.A. (Hamilton College), M.S., Ph.D. (Yale University); associate professor of biology

**RHONA JUSTICE-MALLOY**, B.S. (University of Evansville), M.F.A., Ph.D. (University of Georgia); professor of theatre arts

**IVO KAMPS**, B.A. (Quincy University), M.A. (SUNY Stony Brook), Ph.D. (Princeton University); chair and professor of English

**IKHLAS A. KHAN**, B.S., M.S. (Aligarh Muslim University), Ph.D. (Ludwig-Maximilians-Universitat); assistant director, National Center for Natural Products Research, research professor of pharmacognosy, program director for Federal Drug Administration program, research professor, and coordinator for natural products research in the Center for Water and Wetland Resources

**RAHUL KHANNA**, M.S., Ph.D. (West Virginia University); assistant professor of pharmacy administration and research assistant professor in the Research Institute of Pharmaceutical Sciences

**MARVIN PORTER KING**, B.A. (University of Texas at Austin), Ph.D. (University of North Texas); associate professor of political science

**JASON E. KLODT**, B.A. (Central University of Iowa), M.A. (Indiana State University), Ph.D. (Michigan State University); associate professor of modern languages

**KATHY B. KNIGHT**, B.A. (The University of Mississippi), M.S. (Mississippi State University), Ph.D. (Auburn University); interim department chair and associate professor of nutrition and hospitality management

**PRZEMOTADEUSZ KRANZ**, M.S., M.S. (Uniwersytet im. Adama Mickiewicza), Ph.D. (Polska Rzeczpospolita Ludowa); associate professor of mathematics

**ROBERT S. KROEGER**, B.S. (Whitworth College), M.S. (Washington State University), Ph.D. (University of Pittsburgh); professor of physics and astronomy

**JOEL S. KUSZMAUL**, B.S. (Michigan Technological University), M.S. (University of Minnesota-Twin Cities), Ph.D. (University of California-Berkeley); interim associate dean for academic and student affairs, chair and associate professor of geology

**IWO M. LABUDA**, M.S., Ph.D. (Polska Rzeczpospolita Ludowa); chair and professor of mathematics

**ELLEN LACKEY**, B.E., M.S. Ph.D. (The University of Mississippi); professor of mechanical engineering and director of composite materials research group test facilities

**PAUL K. LAGO**, B.A., M.A. (Bemidji State University), Ph.D. (North Dakota State University); chair and professor of biology

**ELISE S. LAKE**, B.S., M.A. Ph.D. (University of Washington); associate professor of sociology and research associate professor of population studies

**LAUREL GREENWAY LAMBERT**, B.S. (Eastern Michigan University), M.S., Ph.D. (University of Southern Mississippi); associate professor of nutrition and hospitality management and program director for the didactic program in dietetics

**JOHN M. LATARTARA**, B.M., M.M., D.M. (New England Conservatory of Music); associate professor of music

**CHRISTOPHER J. LEARY**, B.S., M.S. (Auburn University), Ph.D. (University of Oklahoma-Norman Campus); assistant professor of biology

**MARC H. LERNER**, B.A. (University of Chicago), Ph.D. (Columbia University-New York City); associate professor of history

**TIMOTHY D. LETZRING**, B.S. (Louisiana College), J.D. (Stetson University), Ed.D. (University of Georgia); chair and professor of leadership and counselor education

**THERESA HILARY LEVITT**, B.S. (Massachusetts Institute of Technology), M.A., Ph.D. (Harvard University); associate professor of history

**ANDRE PETER LIEBENBERG**, Ph.D. (University of Georgia); Gwennette P. and Jack W. Robertson Chair of Insurance and associate professor

**IVONNE ANDREA LIEBENBERG**, B.S., M.A. (Universidad de Chile), Ph.D. (University of Georgia); clinical assistant professor of finance

**YI LIN**, B.A. (Shandong University), M.S. (Indiana University-Bloomington), Ph.D. (University of Iowa); assistant professor of Chinese

**JERE W. LITTLEJOHN**, B.A. (University of Northern Colorado), M.B.A., D.B.A. (Mississippi State University); clinical assistant professor of business communication

**JOHN A. LOBUR**, B.A. (Kalamazoo College), Ph.D. (University of Michigan-Ann Arbor); associate professor of classics

**JASPER MARK LOFTIN**, B.A., M.A. (University of Texas at Tyler), Ph.D. (University of Illinois-Urbana Campus); chair and professor of health, exercise science and recreation management

**THOMAS W. LOMBARDO**, B.S. (University of Rochester), M.S., Ph.D. (University of Pittsburgh); director of research integrity and compliance and associate professor of psychology

**GARY LEE LONG**, B.A. (California State University-Sacramento), M.A., Ph.D. (SUNY Stony Brook); professor of sociology and research professor of population studies

**MATTHEW L. LONG**, B.F.A. (Kansas City Art Institute), M.F.A. (Ohio University); associate professor of art

**FANNYE E. LOVE**, B.S. (Mississippi Valley State University), M.Ed. (The University of Mississippi), Ph.D. (Kansas State University); interim dean of Desoto Center and professor of curriculum and instruction

**GREGORY J. LOVE**, B.A., Ph.D. (University of California-Davis); assistant professor of political science

**REBECCA LOWE**, B.A. (The University of Mississippi), M.A. (Kansas State University), Ph.D. (Central Michigan University); clinical assistant professor and co-director of Speech and Hearing Clinic

**JAMES ANDREW LUMPP**, B.A. (Knox College), M.S. (University of Illinois-Urbana Campus), Ph.D. (University of Missouri-Columbia); assistant professor of journalism

**DANIELLE JEANETTE MAACK**, B.S. (Kent State University), M.A. (Pacific University), Ph.D. (University of Wyoming); assistant professor of psychology

**P. TOBIN MAGINNIS**, B.S., M.A. (Western Michigan University), Ph.D. (The University of Mississippi); associate professor of computer and information science

**SOUMYAJIT MAJUMDAR**, B.S., M.S. (Jadavpur University), Ph.D. (University of Missouri-Kansas City); associate director of the Pii Center for Pharmaceutical Technology, associate professor of pharmaceuticals, and research associate professor in the Research Institute of Pharmaceutical Sciences

**STEPHEN LEE MALLORY**, B.S. (Mississippi State University), M.S. (University of Southern Mississippi), Ph.D. (The University of Mississippi); interim chair and professor of legal studies

**NEIL A. MANSON**, B.A. (University of Maryland-College Park), M.A., Ph.D. (Syracuse University); associate professor of philosophy

**PRABHAKAR R. MANTENA**, B.E. (Andhra University), M.S., Ph.D. (University of Idaho); professor of mechanical engineering

**THOMAS C. MARSHALL**, B.S. (Rhodes College), M.S. (University of Florida), Ph.D. (New Mexico Institute of Mining and Technology); professor of physics and astronomy

**JEANETTE S. MARTIN**, B.A. (Michigan State University), M.B.A. (University of Chicago), Ed.D. (University of Memphis); professor of business communication

**DIANE ELAINE MARTING**, B.A. (Ohio State University), M.A., Ph.D. (Rutgers University-New Brunswick); associate professor of modern languages

**MUSTAFA MUHAMMAD MATALGAH**, B.S. (Yarmouk University), M.S. (Jordan University of Science and Technology), Ph.D. (University of Missouri-Columbia); associate professor of electrical engineering

**DANIEL L. MATTERN**, B.A. (Kalamazoo College), M.S., Ph.D. (Stanford University); professor of chemistry and biochemistry

**JOHN C. MATTHEWS**, B.S. (Central Michigan University), M.S., Ph.D. (University of Georgia); professor of pharmacology and research professor in the Research Institute of Pharmaceutical Sciences

**WALTER J. MAYER**, B.A. (University of Missouri-Columbia), M.A., Ph.D. (University of Florida); associate professor of economics

**DAVID J. MCCAFFREY**, B.S. (University of Maryland-College Park), M.S., Ph.D. (The University of Mississippi); professor of pharmacy administration and research professor in Research Institute of Pharmaceutical Sciences

**TYRUS A. MCCARTY**, B.S. (Tougaloo College), M.S., Ph.D. (The University of Mississippi); assistant dean for special initiatives, School of Engineering, and associate professor of mechanical engineering

**BEN W. MCCLELLAND**, B.A. (Grove City College), M.A., Ph.D. (Indiana University-Bloomington); holder of Otilie Schilling Chair and professor of English

**SUSAN S. MCCLELLAND**, M.Ed., Ph.D. (The University of Mississippi); interim chair of teacher education and associate professor of leadership and counselor education

**CHRISTOPHER R. MCCURDY**, B.S. (Ohio Northern University), Ph.D. (University of Georgia); associate professor of medicinal chemistry and pharmacology and research associate professor in the Research Institute of Pharmaceutical Sciences; co-director of the COBRE CORE-NPN/administrative core

**DAVID H. MCELREATH**, B.P.A., M.C.J. (The University of Mississippi), Ph.D. (University of Southern Mississippi); professor of legal studies

**KATHRYN B. MCKEE**, B.A. (Centre College), M.A., Ph.D. (University of North Carolina-Chapel Hill); McMullan associate professor of Southern studies and associate professor of English

**KERRY B. MELEAR**, B.A., M.A.C. (The University of Mississippi), Ph.D. (Florida State University); associate professor of leadership and counselor education

**MARILYN MENDOLIA**, B.M. (Loyola University in New Orleans), M.A. (SUNY College at New Paltz), Ph.D. (Dartmouth College); associate professor of psychology

**MICHAEL F. METCALF**, B.A. (Harvard University), M.A., Ph.D. (Stockholm University); interim chair of public policy leadership, senior international officer, and professor of history

**JAMES ARTHUR MEURS**, B.L.S., M.B.A. (Grand Valley State University), Ph.D. (Florida State University); assistant professor of management

**MICAH BARUCH MILINOVICH**, B.A., M.A. Ph.D. (University of Rochester); assistant professor of mathematics

**ERWIN DIAZ MINA**, B.A. (University of Havana), M.S., Ph.D. (Vanderbilt University); assistant professor of mathematics

**CHARLES D. MITCHELL**, B.A. (Mississippi State University), J.D. (The University of Mississippi); assistant dean of journalism and assistant professor

**JENNIFER M. MIZENKO**, B.A. (Kenyon College), M.A. (Ohio State University); professor of theatre arts

**JOEL MOBLEY**, B.S. (University of Kentucky), M.A., Ph.D. (Washington University); associate professor of physics and astronomy

**JON R. MOEN**, B.A. (Saint Olaf College), M.A., Ph.D. (University of Chicago); chair and associate professor of economics

**ROBERT E. MONGUE**, B.S. (Franklin and Marshall College), J.D. (University of Maine); assistant professor of legal studies

**ANN ELIZABETH MONROE**, B.S. (University of Tennessee-Knoxville), M.A., Ed.D. (The University of Mississippi); assistant professor of education and coordinator of elementary education

**DEBRA J. MOORE**, B.S. (Mississippi State University), M.S.W. (University of Southern Mississippi), Ph.D. (The University of Mississippi); associate professor of social work

**JERILOU J. MOORE**, M.S. (Mississippi University for Women), Ed.S., Ph.D. (The University of Mississippi); associate professor of curriculum and instruction

**RITA M. MORAES**, M.S., Ph.D. (Mississippi State University); research associate professor in the National Center for Natural Products Research and research associate professor for natural products research in the Center for Water and Wetland Resources

**DUFFY ARTHUR MORE**, B.S. (Northern Illinois University), M.B.A. (San Francisco State University), Ph.D. (The University of Mississippi); clinical assistant professor of accountancy

**MICHAEL C. MOSSING**, B.S. (Michigan State University), Ph.D. (University of Wisconsin-Madison); associate professor of chemistry and biochemistry

**CHRISTOPHER L. MULLEN**, B.S., M.S. (Rice University), Ph.D. (Princeton University); associate professor of civil engineering

**JANICE W. MURRAY**, B.A., M.F.A. (Yale University); associate dean of the College of Liberal Arts and professor of art

**SATHYANARAYANA NARASIMHA MURTHY**, B.P.H., M.P.H. Ph.D. (Bangalore University); associate professor of pharmaceuticals and research associate professor in the Research Institute of Pharmaceutical Sciences

**DALE G. NAGLE**, B.S., Ph.D. (Oregon State University); professor of pharmacognosy and research professor in the Research Institute of Pharmaceutical Sciences

**MICHAEL V. NAMORATO**, B.A. (Iona College), M.A., Ph.D. (Michigan State University); professor of history

**N. P. DHAMMIKA NANAYAKKARA**, B.S. (The Open University of Sri Lanka), Ph.D. (University of Peradeniya); research professor, National Center for Natural Products Research

**JOHN R. NEFF**, B.A. (California State Polytechnic University), M.A., Ph.D. (University of California-Riverside); associate professor of history

**DAVE L. NICHOLS**, B.S., M.B.A. Ph.D. (Oklahoma State University); associate professor of accountancy

**BRICE NOONAN**, B.S. (University of Florida), M.S., Ph.D. (University of Texas at Arlington); assistant professor of biology

**TIMOTHY W. NORDSTROM**, B.A. (University of Michigan-Ann Arbor), M.A. (University of Kentucky), Ph.D. (Pennsylvania State University); associate professor of political science

**MILORAD NOVICEVIC**, B.S. (University in Belgrade), M.B.A. (Metropolitan State University), Ph.D. (University of Oklahoma-Norman Campus); associate professor of management

**JOHN H. O'HAVER**, B.S., M.S. Ph.D. (University of Oklahoma-Norman Campus); director of Center for Mathematics and Science Education and professor of chemical engineering

**JO ANN O'QUIN**, B.A. (Arkansas Tech University), M.A., Ph.D. (The University of Mississippi); professor of social work and pharmacy administration

**DANIEL EDMUND O'SULLIVAN**, B.A. (College of the Holy Cross), M.A. (University of North Carolina-Chapel Hill), Ph.D. (Boston College); associate professor of modern languages and senior fellow of Residential College

**CLIFFORD A. OCHS**, B.A. (University of California-Los Angeles), Ph.D. (Cornell University-Endowed Colleges); associate professor of biology

**MINJOO OH**, B.A. (Sookmyung Women's University), M.A., Ph.D. (SUNY at Buffalo); associate professor of sociology

**IGOR OSTROVSKII**, Ph.D. (Kiev University); professor of physics and astronomy

**SCOTT G. OWENS**, B.A. (University of Northern Colorado), M.A. (University of South Florida), Ph.D. (Florida State University); associate professor of health, exercise science and recreation management

**TED M. OWNBY**, B.A. (Vanderbilt University), M.A., Ph.D. (Johns Hopkins University); director of the Center for the Study of Southern Culture and professor of history

**TERRY L. PANHORST**, B.S., M.S. (University of Missouri-Rolla), Ph.D. (University of Nevada-Reno); assistant professor of geology and geological engineering

**GLENN R. PARSONS**, B.S. (University of Alabama at Birmingham), M.S. (University of South Alabama), Ph.D. (University of South Florida); professor of biology

**DAVID S. PASCO**, B.A. (Thiel College), M.S., Ph.D. (SUNY at Buffalo); assistant director, National Center for Natural Products Research, research professor of pharmacognosy, and director of the cancer drug discovery core, Oxford campus, UMMC Cancer Institute

**MOLLY CLAIRE PASCO-PRANGER**, B.A. (Oberlin College), Ph.D. (University of Michigan-Ann Arbor); associate professor of classics

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