THE UNIVERSITY OF ALABAMA GRADUATE SCHOOL

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The Catalog is available only online as of Fall 2007 and is updated continually. When the Graduate Council revises a policy, the previous policy and the updated policy (with "effective date") both will appear in the online Catalog. The previous policy will be deleted after 12 months. Any new policy will be inserted at the appropriate place in the Catalog.

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1.1 INTRODUCTION

The University of Alabama, Graduate School, 102 Rose Administration Building, Box 870118, Tuscaloosa, AL 35487-0118; (205) 348-5921; e-mail: gradschool@ua.edu; or visit the website of the Graduate School. This catalog is produced by the Graduate School. Although the publisher of this catalog has made every reasonable effort to attain factual accuracy herein, no responsibility is assumed for editorial, clerical, or printing errors or error occasioned by honest mistake. All information contained in this catalog is subject to change by the appropriate officials of The University of Alabama without prior notice. Although this catalog intends to reflect any current policies or rules of The Board of Trustees of The University of Alabama referred to or incorporated herein, users are cautioned that changes or additions to policies or rules may have become effective since the publication of this material. In the event of such a conflict, the current statements of board policy contained in the official minutes and manual of rules, bylaws, and guidelines shall prevail.

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The University of Alabama complies with applicable laws prohibiting discrimination, including Titles VI and VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act, Executive Order 11246, Title IX of the Education Amendments of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, the Vietnam Era Veterans Adjustment Assistance Act, the Age Discrimination Act of 1975, and the Americans with Disabilities Act of 1990, and does not discriminate on the basis of race, color, religion, national origin, sex, age, disability, or veteran status in admission or access to, or treatment or employment in, its programs and services. Inquiries and concerns may be directed to Gwendolyn D. Hood, University Compliance Officer, 171 Rose Administration Building, Box 870300, Tuscaloosa, AL 35487-0300, (205) 348-5855 (Voice/TDD). This notice is available in alternative formats upon request.

The University is committed to making its programs and services accessible to individuals with disabilities and seeks to be responsive to the needs of qualified students with disabilities. Students who may need special services or reasonable accommodations because of a disability are encouraged to contact the Office of Disability Services (ODS), 133-B Martha Parham Hall East, Box 870185, Tuscaloosa, AL 35487-0304; telephone (205) 348-4285; TTY (205) 348-3081.

1.3 CAMPUS SECURITY REPORT

Each year, The University of Alabama publishes the UA Annual Campus Security Report. It contains crime statistics for the three most recent calendar years. It also details UA security policies and procedures. The online Annual Campus Security Report is provided in accordance with the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act. The Alabama Department of Public Safety, a state agency, also provides on its website an online listing of sex offenders currently registered with the state. For information regarding the enrollment or employment of registered sex offenders at The University of Alabama, or to request a printed copy of the Campus Security Report, write University Police, Attention: Community Services Division, Box 870180, Tuscaloosa, AL 35487-0180.
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Lynda Gilbert, Vice President for Financial Affairs and Treasurer

Karen Baldwin, Vice President for University Advancement

Samory T. Pruitt, Vice President for Community Affairs
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http://graduate.ua.edu/catalog/10500.html
Visit these websites for current information about Graduate School policies, requirements, and degree programs:

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2.6 QUALIFICATIONS OF THE GRADUATE FACULTY

The purpose of the graduate faculty of The University of Alabama is to set standards for graduate work and to provide graduate instruction. It is the responsibility of the graduate faculty in each division to elect its representative(s) to the Graduate Council, which acts for the faculty in matters relating to graduate work. There are three categories of members: full, associate, and temporary. Only members of the graduate faculty may teach courses numbered 500 or above, and only members of the graduate faculty may serve on thesis, dissertation, and examining committees. Only full members may chair dissertation committees, associate members may serve as chair on thesis committees.

Criteria for Full and Associate Members. The dean of each academic division has the annual responsibility of nominating members who meet the following criteria to serve on the graduate faculty:

I. A. Hold the PhD or other terminal degree and
   B. Hold the rank of at least assistant professor in a full-time, tenure-track position
II. Must demonstrate ability and continuing interest in the graduate program and in research or creative activity. Full members must show a strong, continuing record of productive research, publication, creative activity, and scholarly activity appropriate to the discipline. These broad requirements are best interpreted by each department and college considering their unique aspects.
III. Be recommended by the departmental graduate faculty, department chairperson, and dean of the academic division

These nominations then will be acted on by the chairperson of the Graduate Council, the dean of the Graduate School.

Terms of appointment. Full and associate members are appointed for six-year, renewable terms.

Temporary membership. Temporary membership may be extended to well-qualified individuals who do not satisfy the above criteria, to perform specific functions for specific time periods not to exceed three calendar years. They should be recommended by the departmental graduate faculty, department chairperson, and dean of the academic division. These nominations then will be acted on by the chairperson of the Graduate Council, the dean of the Graduate School. While temporary faculty members may serve as co-chair to a committee, they may NOT serve as the sole chair.

Administrative appointments. Faculty members currently on administrative appointments or returning to the faculty from such appointments are eligible for full or associate membership on the graduate faculty. They should show, at a minimum, promise of satisfying the appropriate departmental and University membership criteria. The individual's record of teaching and research before becoming an administrator should be considered.

Retirement. Members of the graduate faculty are automatically permitted to retain graduate faculty status for one year after retirement. After a graduate faculty member retires, he or she may need to continue to serve as a chair or member of students' thesis or dissertation committees. Retired graduate faculty members may be appointed as temporary members of the graduate faculty for these purpose and/or to perform other specific functions. The nomination and appointment procedures for these temporary appointments are the same as those adopted by the academic unit and the University.
2.7 GRADUATE FACULTY

A current list of Full and Associate Members of the Graduate Faculty is available online. [please wait a few seconds for the list to load]. It includes each faculty member’s name, department, status (associate or full member), appointment date, and end-of-appointment date. Faculty members need to apply through their department and the dean’s office of their college/school for reappointment to the graduate faculty during the fifth year of their six-year appointment, in order to continue to teach graduate courses, serve on thesis and dissertation committees, and chair dissertation committees (full members only.)

A list of Temporary Graduate Faculty is also available online. [please wait a few seconds for the list to load]. The graduate dean appoints such faculty to perform specific functions (e.g., serving on a thesis or dissertation committee) for a finite period of time, and the appointment ends when the function is completed.

Graduate Faculty Appointment Procedure

The procedure is the same for initial appointments and renewal appointments. The department chair sends the dean of the college an appointment request either for full, associate or temporary graduate faculty status.

The department chair attaches the faculty member's current curriculum vitae to the request. The dean of the college reviews the request and, if the dean approves, forwards the request to the dean of the graduate school. The dean of the graduate school reviews the request and responds to the dean of the college, the department chair and the graduate faculty candidate.

[Note. Information on Qualifications of Graduate Faculty (such as full vs. associate vs. temporary status) is available at the Graduate School's homepage, A-Z index, and in Section 2 of this Catalog.]
3.1 MISSION, VISION AND STRATEGIC GOALS OF THE UNIVERSITY

Our Mission
To advance the intellectual and social condition of the people of the State through quality programs of teaching, research, and service.

Our Vision
The University of Alabama will be the university of choice for the best and brightest students in Alabama and a university of choice for all other students who seek exceptional educational opportunities. The University of Alabama will be a student-centered research university and an academic community united in its commitment to enhancing the quality of life for all Alabamians.

Our Strategic Goals
1. Advance the University's academic, research, scholarship and service priorities, consistent with a top tier university, and continue to promote growth and national prominence in these areas.
2. Retain and recruit outstanding faculty and staff to support the teaching, research and service mission of the University.
3. Enhance the University's learning environment to attract and retain excellent students.
4. Develop a university-wide emphasis on leadership as a primary role of the flagship university of the State of Alabama.
3.2 MISSION OF THE GRADUATE SCHOOL

The Graduate School, through graduate offerings of the various colleges and schools, prepares students for careers in a wide range of teaching, research, creative, and service activities. The Graduate School assists the graduate faculty in offering programs of study leading to more than 120 master's, educational specialist, and doctoral degrees. It works with the office of the Executive Vice President and Provost to coordinate the ongoing program review of all academic departments and programs of the University.

Personnel of the Graduate School work with departments to identify prospective graduate students and enroll a graduate student population consistent with the enrollment objectives of the University. The objectives include not only overall enrollment, but also the enrollment of a diverse student body. The Graduate School operates in cooperation with the other colleges and schools of the University to foster the development of teaching by Graduate Teaching Assistants.
In 1819, the Congress of the United States donated 46,000 acres of land within the State of Alabama for the endowment of a seminary of learning. The board of trustees of the University was created by the General Assembly of Alabama in 1821, and on April 18, 1831, the University was opened for the admission of students. From the outset, the University offered graduate degrees, the first being a master of arts degree conferred in 1832. On April 4, 1865, most University buildings were burned to the ground by a body of federal cavalry. Construction of new buildings began in January 1867, and classes were resumed in April 1869. On February 25, 1884, the federal government donated 72 sections of public lands within the state to The University of Alabama in restitution for its loss in buildings and equipment when the campus was destroyed in 1865.

The Graduate School was organized as a specialized division of the University in 1924, when the University began to offer master’s degrees. In the fall of 1950, the University began to offer the PhD degree. Today, The University of Alabama provides a comprehensive program of graduate study in more than 120 master’s, educational specialist, and doctoral degree programs. The comprehensive program of graduate study embraces the humanities, the sciences, education, and several professional areas.

Graduate study is designed for college graduates who desire a deeper and more thorough involvement in scholarship and research and more thorough professional preparation in their chosen fields. Graduate study, especially at the doctoral level, is designed to develop independent scholarship, originality, and competence in research or competence in the various professional areas in which doctoral programs are offered.

The Graduate School is composed of the divisions that offer graduate instruction leading to advanced degrees. The faculty of the Graduate School consists of those faculty members of the divisions who are deemed qualified by their peers and deans to teach and do research of graduate caliber and who participate actively in these graduate activities. The Graduate School has supervision over all graduate work in the University except law and medicine.

The Graduate Council is composed of four appointed and 22 elected members and formulates graduate policy. The dean of the Graduate School is ex officio chairperson of the Council and is responsible for the administration of the regulations and requirements for advanced degrees.
3.4 ACCREDITATION

The University of Alabama is accredited by the **Southern Association of Colleges and Schools Commission on Colleges** to award baccalaureate, masters, educational specialist, and doctoral degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of The University of Alabama.

Selected graduate programs have been accredited by the American Assembly of Collegiate Schools of Business, American Bar Association, American Library Association, American Psychological Association, American Speech-Language-Hearing Association, Association of Research Libraries, Commission on Collegiate Nursing Education, Council on Social Work Education, National Association of School Psychologists, National Association of Schools of Art and Design, National Association of Schools of Dance, National Association of Schools of Music, National Association of Schools of Theatre, Council on Accreditation of Counseling and Related Educational Programs, Council on Rehabilitation Education, and National Council for Accreditation of Teacher Education.
Libraries at The University of Alabama provide graduate students with an extensive array of print and virtual online collections that encourage and support a rich and fruitful graduate education. With more than three million volumes and access to more than 47,000 scholarly journals, the Libraries rank among the top forty publicly funded U.S. university research libraries in annual expenditures for collections per Ph.D. program.

The University Libraries’ website is available 24/7 from any computer, provides all library users with access to integrated collections, services, and information resources. Currently the University Libraries provide access to over 30,000 full text electronic journals. In addition, more than 300 databases including indexes, abstracts, and other reference resources are linked from the Libraries’ website. A growing number of electronic books are also being added to the collection in all disciplines. Course specific software is available on a number of computers within the Libraries.

The Libraries' catalog containing records for more than three million items in all formats (print, microfilm, archival, serials) can also be accessed via the Libraries' home page. Digital collections from the W. S. Hoole Special Collections Library are linked through a separate catalog on the home page. Links to books and electronic materials on reserve, to Interlibrary Loan services, and to other self-initiated services such as renewing books and requesting materials from the Libraries' Annex are also available. Faculty and students also have access to research collections encompassing more than one million titles from the Center for Research Libraries (CRL) via interlibrary loan.

Subject specialists work closely with graduate students and faculty to assist them in ordering or locating materials and in advising students and faculty who need specialized assistance with research projects. A list of subject specialists is available on the Libraries' website. Reference services are available in person, over the phone, and online. The University Libraries provide services for users with disabilities. In addition, librarians provide instruction for courses and can assist graduate assistants and faculty with developing course-specific instruction or tutorials. For students needing digital media for class projects or individual papers, expert assistance is provided in the Sanford Media Center in Gorgas Library.

As research has become increasingly interdisciplinary in nature, scholars may find collections of importance in more than one library. There are eight libraries on the University of Alabama campus. Five discipline-related libraries compose the University Libraries system. Three others are attached to their respective administrative units (Health, Law and Maps).

Amelia Gayle Gorgas Library, serving the humanities, social sciences, and arts is centrally located on the University Quadrangle. The Music Library, the Sanford Media Center and the A.S. Williams III Americana Collection are located in Gorgas Library. Three other units are located adjacent to their discipline-related teaching areas: Angelo Bruno Business Library, McLure Education Library, and Eric and Sarah Rodgers Library for Science and Engineering. The W. S. Hoole Special Collections Library is located on the second floor of Mary Harmon Bryant Hall. Under separate administration are the Health Sciences Library located in the University Medical Center, the Bounds Law Library located in the Law Center, and the Map Library located in Farrah Hall.

The W. S. Hoole Special Collections Library contains materials related to Alabama and the Deep South (including manuscripts), rare editions, Confederate imprints, pamphlets, maps, archives of the University, and Alabama state publications.

The A.S. Williams III Americana Collection is located on the third floor of Gorgas Library. The book collection contains some 20,000 volumes and pamphlets, published between the late 17th century and 2009. These pertain to the U.S. presidents and the history and culture of
the South. The Civil War is particularly well represented with some 6,000 volumes published from the earliest days of Secession to the present and reflecting the observations and opinions of the Union, the Confederacy, European visitors during the War, veterans, and subsequent generations of scholars. Unpublished portions of the Collection contain archival materials ranging from 19th-century letters, diaries, and newspapers to business records and a wide variety of documents recording the American experience of both the famous and the unknown from the mid 18th century to the Great Depression. Particularly noteworthy are some 12,000 photographs of the South taken between the 1850s and the mid-1930s.

The Libraries serve as the Regional Depository for United States government publications. Through interlibrary loan and document delivery services, the Libraries provide options for obtaining materials unavailable in the University's collections. The University issues each student an Action Card that provides access to library services throughout the University Libraries system.

The University of Alabama has an academic membership in the Association of Research Libraries, a selective group of institutions emphasizing research and graduate instruction at the doctoral level and supporting large, comprehensive collections of library materials. The University Libraries also hold memberships in the Center for Research Libraries, the Association of Southeastern Research Libraries, the Southeastern Library Network, the Coalition for Networked Information, and the Network of Alabama Academic Libraries.
3.6 OFFICE OF INFORMATION TECHNOLOGY

The Office of Information Technology (OIT) provides state-of-the-art technology services to the University of Alabama community. Faculty, staff, and students can turn to the OIT for access to and assistance with e-mail, websites, network, and much more. Visit http://oit.ua.edu for a complete overview of the Office of Information Technology services.

**Student E-mail Accounts (Crimson)** All UA students have Crimson e-mail accounts automatically created for them. Crimson is a Google Apps for Education domain (crimson.ua.edu). Crimson e-mail accounts have the familiar GMAIL interface and 7 GB of storage. These accounts are used as students' official University e-mail addresses.

**Campus Internet Access** ResNet, a high-speed Internet connection on campus is available in all residence halls. All academic buildings have wireless access. Additional information, including access instructions, is located at http://oit.ua.edu.

**Resources for Research** Those students who need computing resources for their research are also served by OIT. As noted previously, bama.ua.edu accounts are given to all students and can provide a Unix platform for programming, statistical computing, or Web development. The University of Alabama is also a member of the Alabama Research and Education Network (AREN), which provides high-speed network access to the SGI Altix supercomputer and the Dense Memory Cluster and other network facilities. For more information about AREN local access and support, visit the Alabama Supercomputer Authority's website. The University is also a charter member of Internet2 which connects schools and universities with a dedicated high-speed network for research.

In addition, University faculty, staff, and students may get accounts on the OIT supported High Performance Computing (HPC) cluster, which can maintain computation speeds of 1.34 teraflops (a trillion floating point operations per second and has a storage capacity of over three terabytes). Account application forms and terms of use are online at the UAHPC site.
3.7 RESEARCH AGENCIES

Oak Ridge Associated Universities
Since 1946, students and faculty of The University of Alabama have benefited from its membership in Oak Ridge Associated Universities (ORAU). ORAU is a consortium of 96 colleges and universities and a contractor for the U.S. Department of Energy (DOE) located in Oak Ridge, Tennessee. ORAU works with its member institutions to help their students and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for fellowship, scholarship, and research appointments; and to organize research alliances among its members.

Through the Oak Ridge Institute for Science and Education (ORISE), the DOE facility ORAU operates, undergraduates, graduates, postgraduates, and faculty enjoy access to a multitude of opportunities for study and research. Students can participate in programs covering a wide variety of disciplines, including business, earth sciences, epidemiology, engineering, physics, geological sciences, pharmacology, ocean sciences, biomedical sciences, nuclear chemistry, and mathematics. Appointment and program length range from one month to four years.

Many of these programs are specially designed to increase the numbers of underrepresented minority students pursuing degrees in science- and engineering-related disciplines. A comprehensive listing of these programs and other opportunities, their disciplines, and details on locations and benefits can be found in the ORISE Catalog of Education and Training Programs. ORAU's Office of Partnership Development seeks opportunities for partnerships and alliances among ORAU's members, private industry, and major federal facilities. Activities include faculty development programs, such as the Ralph E. Powe Junior Faculty Enhancement Awards, the Visiting Industrial Scientist Program, and various services to chief research officers. For more information about ORAU and its programs, contact Dr. Joe Benson, UA's Vice President for Research and ORAU councilor at (205) 348-4566; or Ms. Monnie Champion, ORAU corporate secretary, at (865) 576-3306; or visit the ORAU homepage.

- Alabama Business Research Council
- Alabama Council on Economic Education
- Alabama Law Institute
- Alabama Museum of Natural History
- Alabama Productivity Center
- Alabama State Oil and Gas Board
- Other Research Organizations

The following organizations also contribute to the research environment at The University of Alabama:
- Animal Care Facility
- William R. Bennett Alabama International Trade Center
- Bevill Center for Advanced Manufacturing Technology
- J. Nicholene Bishop Biological Station
- Brewer-Porch Children's Center
- Bureau of Educational Services and Research
- Bureau of Legal Research
- Capstone International Center
- Capstone Poll
- Cartographic Laboratory
- Center for Business and Economic Research
- Center for Current Accounting Issues
- Center for Developmental and Learning Disorders
- Center for Economic Education
- Center for Land Information Analysis and Mapping
- Center for Materials for Information Technology (MINT)
- Center for Public Television

http://graduate.ua.edu/catalog/12500.html
Center for the Study of Aging
Center for Teaching and Learning
Child Development Center
Coalbed Methane Resource Center
Critical Languages Center
Early Childhood Learning Center
Electron Microscope Laboratory
English Language Institute
Evaluation and Assessment Laboratory
Gadsden Educational and Research Center
Geographic Information Systems Laboratory
Geological Survey of Alabama
Health Research Consulting Service
Hess Institute for Retailing Development
Human Resources Institute
Infant Laboratory
Institute for Communication Research and Service
Institute for the Book Arts
Institute for Social Science Research
Institute of Alcoholism Research and Studies Inc.
Institute of Higher Education Research and Services
Inter-University Consortium for Political Research
Laboratory for Human Osteology
Latin American Studies Program
Legal Counsel for the Elderly
Marine Environmental Sciences Consortium
Marine Science Program
Metal Casting Technology Center
Minority Culture Archives
Moundville Archaeological Park
National Network of State Polls
Natural Resources Center
Office of Archaeological Research
Office of Educational Media
Office of Informational Technology
Office of Institutional Research
Office of Sponsored Engineering Programs
Program for Rural Services and Research
Project ROSE
Psychology Clinic
Remote Sensing Laboratory
Research Grants Committee
RISE Program
Small Business Development Center
Speech and Hearing Center
State Data Center
Transportation Research Group
University Child Care Services
University of Alabama Arboretum
University of Alabama Art Gallery
University of Alabama Ichthyological Collection
University of Alabama Press
University of Alabama Theatre
U.S. Bureau of Mines
U.S. Geological Survey
West Alabama Comprehensive Services (WACS)
Students applying for financial assistance through the Graduate School must have already completed an undergraduate degree and be admitted to the Graduate School of The University of Alabama. The Financial Support web site has detailed graduate financial support information.

Application

Only academically superior students are eligible for teaching assistantships, research assistantships, or the other graduate awards. An eligible student also must hold regular or conditional admission to a degree program. Conditionally admitted students whose graduate GPAs fall below 3.0 at any time during their conditional status will not be allowed to hold graduate teaching assistantships until such time as the GPA has increased to 3.0 or better. Nondegree students or students on academic warning may not hold assistantships. Prospective graduate students should contact their proposed departments and request information and application forms for assistantships, scholarships, and other awards. Prospective applicants should start the application process in the fall of a preceding academic year and have their applications completed no later than February 15 in order to be considered for financial assistance. Some departments may have earlier deadlines. Applicants should contact their departments for additional information.

Students enrolled in degree programs in the Graduate School are also eligible to apply for federally supported financial aid. Further information can be obtained from the Office of Student Financial Aid, 106 Student Services Center, Box 870162, Tuscaloosa, AL 35487-0162; telephone (205) 348-6756.

Fellowships and Assistantships**

**Fellowships and scholarships may affect a student's allowable federal financial aid. Students who receive federal financial aid should consult with the UA Office of Student Financial Aid at (205) 348-2989 before accepting any of the fellowships listed below.

Departmental Assistantships

Most academic departments have teaching or research assistantships with stipends (salaries) equal to or greater than the posted UA minimum stipend per academic year for 6 semester hours of teaching per semester, or 20 hours per week of research or its equivalent. The UA minimum stipend amount increases periodically, and a summary table showing Graduate Assistantship Rates gives the current stipend amount and the amounts for several previous years. Assistantships with lesser assignments carry proportionate stipends.

Students should contact departments directly to obtain information and application forms for assistantships.

Teaching and research assistants who are assigned duties of 0.5 FTE or more may possibly receive tuition scholarships. The semester tuition grant for any eligible graduate assistant is limited to the full University charges for 15 graduate hours or to the student's actual tuition costs, whichever is less. Graduate assistants assigned duties of less than 0.5 FTE receive payment at the ratio of assigned FTE to 0.5 FTE. When an assistant is paid from funds other than permanently budgeted funds, the provider of the funds used to create the assistantship may also provide a tuition grant, if the department has made such a provision.

The Graduate School will provide single coverage health insurance for each qualified assistantship, based on the FTE of the appointment same as tuition benefits.
Recipients of assistantships may be entitled to relief from paying full nonresident tuition during the Interim and/or summer sessions, again dependent upon the FTE of their appointments. Contact the Graduate School at 205-348-5921 or visit the website.

Any nonresident foreign student who is offered a graduate assistantship is limited to a maximum workload of 20 hours per week for all combined appointments. This translates to a maximum of 0.5 FTE (Full Time Equivalency). All non-native speakers of English who accept classroom teaching or other instructional duties must successfully complete the International Teaching Assistant Program (ITAP). Students are recommended for ITAP by their departments.

Graduate assistants whose appointments are terminated before the end of the academic semester or term are eligible only for reduced tuition grants. Those assistants who resign or are dismissed from their duties before the end of the academic semester or term are personally responsible for the payment of any tuition and fees not covered by the reduced tuition grant.

Withdrawal from classes for medical or any other reason may disqualify your assistantship for the whole semester, so please check with the Graduate School BEFORE making any withdrawal.

Check out The Department's Guide to the Administration of Graduate Assistantships for detailed information concerning departmental graduate assistantships.

McNair Graduate Fellowships: The University of Alabama Graduate School awards a limited number of McNair Graduate Fellowships. These fellowships are specifically for entering graduate students who have either completed a McNair Scholars program as an undergraduate or who are McNair eligible; i.e., low income AND first-generation college student or a member of a group traditionally underrepresented in graduate education (Hispanic, African American, Native American, Native Hawaiian, Pacific Islander). To be considered for the fellowship, a student must be admitted to a graduate degree-seeking program. Preference is given to students who have completed a McNair program and have been accepted into a Ph.D. program at The University of Alabama.

The service-free stipend for these fellowships is $15,000 for the academic year plus a scholarship to pay full tuition for up to 15 hours for fall and spring semesters in each academic year, according to the basic UA schedule for in-state/out-of-state tuition and fees. The Graduate School will provide single health insurance coverage for each recipient. Departments may elect to add a graduate assistantship up to .50 FTE to the first two years of the McNair Graduate Fellowship. A student must be enrolled full-time and maintain a 3.0 cumulative grade point average to remain eligible for the fellowship.

Following two years of stipend and tuition support from the Graduate School, the student’s home department will be required to continue to support the McNair Graduate Fellow for at least an additional two years through departmental research and teaching assistantships or on grant-funded research assistantships or fellowships. For master’s students the Graduate School will provide one year of support followed by one year of support by the student’s home department.

Nominations may be made by department or by student (with departmental support and funding commitment). For detailed application procedure, see Financial Handbook (Section 3.4)

Graduate Council Fellowships: The University of Alabama awards approximately 80-85 non-renewable Graduate Council Fellowships each year. The fellowships carry a stipend of $15,000 for the academic year and a scholarship to pay full tuition for up to 15 hours for fall and spring semesters in each academic year, according to the basic UA schedule for in-state/out-of-state tuition and fees. The Graduate School will provide single health insurance
coverage for each recipient. A student must be enrolled full-time and maintain a 3.0 cumulative grade point average to remain eligible for the fellowship. At least one-half of these fellowships are awarded to beginning graduate students at the University. **Nominations are made by academic departments.** Interested students should contact their departments for more information about the nomination process and deadlines.

**Graduate Council Research/Creative Activity Fellowships:** Graduate Council Research/Creative Activity Fellowships with stipends of $15,000 per academic year are available to support graduate students in their own thesis/dissertation work or those working on faculty projects. The Graduate School will provide single health insurance coverage for each recipient.

Recipients for the coming academic year are selected once a year, in January. Nominations are made by academic departments. Interested students should inquire at their department offices.

Students who are awarded Graduate Council Research/Creative Activity Fellowships also receive scholarships equal to their full in-state and out-of-state tuition charges for up to 15 hours for fall and spring semesters of the award year. Normally, 80 to 85 Graduate Council Fellowships (including regular Graduate Council Fellowships and Research/Creative Activity Fellowships) are awarded each year.

A student must be enrolled full-time and maintain a 3.0 cumulative grade point average to remain eligible for the fellowship.

**Graduate Student Travel and Research Support Fund:** These awards are available to all graduate students on a competitive basis and are based on departmental nominations. For more information, students should contact their department offices.

**Joint Faculty Development Program Fellowships:** The University of Alabama Graduate School has joint programs with Alabama A & M University, Alabama State University, Oakwood College, and Stillman College for practicing faculty members at these institutions who do not have terminal degrees in their fields of instruction. Faculty members must be nominated for the fellowship by their home institution. Faculty at the partner institutions who wish to complete a terminal degree in their field of instruction must be admitted to a UA degree program as a prerequisite to receiving support from the Joint Faculty Development program. Faculty who participate in this program receive support from both their home institution (to be negotiated with each institution’s vice president for academic affairs) and The University of Alabama Graduate School. The financial support from The University of Alabama consists of a $15,000 annual fellowship stipend and an in-state tuition scholarship (fall and spring semesters; summer semesters, if needed courses are offered in the fellow’s degree program).

The Joint Faculty Development Program provides financial support for up to two years of full-time graduate study in residence on the UA campus to allow the faculty members participating in this program to complete the majority of their required coursework.

**National Alumni Association License Tag Fellowships:** The University of Alabama awards approximately 30 non-renewable License Tag Fellowships each year. The fellowships carry a stipend of $15,000 for the academic year and a scholarship to pay full tuition for up to 15 hours for fall and spring semesters in each academic year, according to the basic UA schedule for in-state tuition and fees. The Graduate School will provide single health insurance coverage for each recipient. **You must be a resident of Alabama to be eligible for this fellowship.** A student must be enrolled full-time and maintain a 3.0 cumulative grade point average to remain eligible for this fellowship. **Nominations are made by academic departments.** Interested students should contact their departments for more information about the nomination process and deadlines.

**Departmental Scholarships and Grants:** Most departments and divisions offer special financial aid for graduate students. Consult the Graduate Catalog or individual departments for a list of these scholarships and grants.
Southern Regional Education Board (SREB) Doctoral Scholars Program: This fellowship supports newly admitted minority graduate students who are seeking the Ph.D. and planning a career in college teaching. The program provides a $15,000 - $20,000 annual stipend and full tuition scholarship for up to 5 years of doctoral study. For more information, contact Dr. Paul Mohr, Director of Special Programs, Alabama Commission on Higher Education at (334) 242-2209 or Paul.mohr@ache.alabama.gov. (Mailing address: P O BOX 302000, Montgomery Alabama 36130-2000. The UA contact for the SREB Doctoral Scholars Program is Blake Bedsole (bbedsole@ua.edu or 205-348-7863).).

Student Financial Aid Graduate Assistantships: Graduate Assistant (GA) positions funded by Student Financial Aid (SFA) are paid through Federal Work-Study funding. Students desiring a GA position must complete the Free Application for Federal Student Aid (FAFSA). Eligibility for the position is contingent upon the student demonstrating need through the application process. For more information, contact Blake Bedsole (bbedsole@ua.edu or 205-348-7863).

Scholarships and Grants

A number of departments and divisions offer special financial aid for graduate students.

College of Arts and Sciences

J. Nicholene Bishop Biology Fellowship Awards. These awards, established by a gift from Ms. Alma Bishop Williams in honor of her aunt, Ms. J. Nicholene Bishop, provide supplementary stipends to graduate teaching assistants in the Department of Biological Sciences in order to recruit and retain outstanding teaching assistants in the biological sciences. Contact: Department of Biological Sciences, 319 Biology Building or Box 870344, Tuscaloosa, AL 35487-0344.

Joseph S. and Carolyn Bolt Endowed Support Fund. This fund was established in 2000 to promote research in art history by graduate students enrolled in the master's program in art history in the Department of Art. Contact: Department of Art, 103 Garland Hall or Box 870270, Tuscaloosa, AL 35487-0270.

Buford Boone Memorial Fellowships. These fellowships were established in 1984 by the Tuscaloosa News in honor of its longtime publisher, Buford Boone. They are used to support graduate teaching fellowships in English. Contact: Department of English, 103 Morgan Hall or Box 870244, Tuscaloosa, AL 35487-0244. Application deadline: January 25.

Ralph L. Chermock Prize. This prize was established in 1978 by friends and colleagues of the late Dr. Ralph L. Chermock. The annual prize is given to a graduate student in natural history or evolutionary biology. Contact: Department of Biological Sciences, 319 Biology Building or Box 870344, Tuscaloosa, AL 35487-0344.

David and Elizabeth DeJarnette Endowed Scholarship in Anthropology. This scholarship, established in 1993, is presented annually to a student of promise who is conducting research on the archaeology of prehistoric Moundville. Contact: Department of Anthropology, 19 ten Hoor Hall or Box 870210, Tuscaloosa, AL 35487-0210. Application deadline: January 25.

Jen-Ho Fang Scholarship. This scholarship was established in 2003 to provide a $3,000 award to an outstanding graduate or undergraduate student in the geological sciences. Contact: Department of Geological Sciences, 2003 Bevill Building or Box 870338, Tuscaloosa, AL 35487-0338.

Lex Arden Fikes Jr. Award. This award is presented in memory of Lex Arden Fikes Jr., a graduate student in the Department of Political Science. It acknowledges the highest level of professional development and departmental service achieved by a student in the graduate program. All graduate students in the Department of Political Science are eligible to be nominated for this award by a faculty member in the department.

http://graduate.ua.edu/catalog/12600.html
**Geological Sciences Advisory Board (GSAB) Scholarship Fund.** This fund was established in 2002 to provide $2,000 renewable awards to geology students meeting minimum academic criteria. Contact: Department of Geological Sciences, 2003 Bevill Building or Box 870338, Tuscaloosa, AL 35487-0338.

**Isabella H. Graham Prize.** This prize was established in 1932 by Dr. John Y. Graham in memory of his wife, and encourages and rewards graduate work in biology. Contact: Department of Biological Sciences, 319 Biology Building or Box 870344, Tuscaloosa, AL 35487-0344.

**Miriam Locke Scholarships.** This fund provides support of professional travel for graduate students in English. Contact: Department of English, 103 Morgan Hall or Box 870244, Tuscaloosa, AL 35487-0244.

**Robert E. Gross Lockheed Fellowship in Physics.** This is a fellowship awarded to graduate students majoring in physics. Contact: Chairperson, Department of Physics and Astronomy, 206 Gallalee Hall or Box 870324, Tuscaloosa, AL 35487-0324.

**Inge and Ilouise Hill Fellowships.** Established by a donation from Mr. and Mrs. Inge Hill, these fellowships aid in recruitment and retention of graduate students in the Department of Biological Sciences, by supplementing teaching or research assistantships. Contact: Department of Biological Sciences, 319 Biology Building or Box 870344, Tuscaloosa, AL 35487-0344.

**W. Gary Hooks Fund.** This fund was established in 1982 by friends, former students, and colleagues of geology faculty member Gary Hooks. The fund provides research support for graduate students in geology. Contact: Department of Geological Sciences, 2003 Bevill Building or Box 870338, Tuscaloosa, AL 35487-0338.

**Henry E. Jacobs Fund.** The fund was established in 1986 by friends and colleagues of Dr. Jacobs to provide travel and publication funds for graduate students in English. Contact: Department of English, 103 Morgan Hall or Box 870244, Tuscaloosa, AL 35487-0244.

**A. S. Johnson Memorial Fund.** This fund, established in 1982, provides travel support for graduate students in the Department of Geology who are making presentations at regional, national, and international meetings. Contact: Department of Geological Sciences, 2003 Bevill Building or Box 870338, Tuscaloosa, AL 35487-0338.

**Margaret S. Quayle Scholarship Fund.** Established by Dr. Quayle in 1975, the fund provides gift scholarships to deserving graduate students in clinical psychology, preferably women. Contact: Department of Psychology, 348 Gordon Palmer Hall or Box 870348, Tuscaloosa, AL 35487-0348.

**Society for the Fine Arts (SFA) Scholarships in Creative Writing.** Funded by members of SFA, this award of at least $1,000 goes to deserving graduate students in the creative writing program of the Department of English. Contact: Creative Writing Program, 101 Morgan Hall or Box 870244, Tuscaloosa, AL 35487-0244.

**Hudson Strode Fellowships for the Study of English Literature.** These fellowships were established in 1989 to commemorate Hudson Strode, who taught Shakespeare and creative writing classes at the University from 1916 to 1963. The awards support graduate study in English, preferably Renaissance studies. Contact: Director of the Strode Program, Department of English, 103 Morgan Hall or Box 870244, Tuscaloosa, AL 35487-0244. Application deadline: February 21.

**Hudson Strode Research Awards.** These awards were established in 1989 to support graduate student research projects in English Renaissance literature. Contact: Director of the Strode Program, Department of English, 103 Morgan Hall or Box 870244, Tuscaloosa, AL 35487-0244.
Donald Strong Award. The Strong Award is presented annually for the best research paper written by a political science graduate student. Papers are submitted to the Graduate Studies Committee by individual graduate students.

Irene Thames Endowed Fine Arts Fellowship Fund. This fund was established in 1986 to recruit and support graduate students studying ceramics, painting, photography, printmaking, and sculpture. Contact: Department of Art, 103 Garland Hall or Box 870270, Tuscaloosa, AL 35487-0270.

Joab Thomas Endowed Fellowship Fund. Established in 1983 by friends and colleagues of Dr. Joab L. Thomas, president of the University from 1981 to 1988, this fund provides a fellowship for a graduate student pursuing an advanced degree in one of the biological sciences. Contact: Department of Biological Sciences, 319 Biology Building or Box 870344, Tuscaloosa, AL 35487-0344.

Bob Work Award for Scholastic Excellence in Archaeology. This annual graduate student paper competition was established in 1978 by the Archaeological Research Association of Alabama in honor of contributors Robert and Anne Work of North Carolina. Contact: Department of Anthropology, 19 ten Hoor Hall or Box 870210, Tuscaloosa, AL 35487-0210. Application deadline: January 25.

Manderson Graduate School of Business

Alabama Power Company Endowed Educational Fellowship. Provides graduate scholarships and postdoctoral fellowships for students pursuing a course of study in or conducting research in commerce and business administration. Contact: Director of Graduate Programs (or the department head/director of any academic department or program in the School), Box 870223, Tuscaloosa, AL 35487-0223.

AmSouth MBA Graduate Fellowship. Provides fellowship awards to students pursuing MBA degrees. Contact: Director of MBA Programs, Box 870223, Tuscaloosa, AL 35487-0223.

Clifford H. and Mary K. Armstrong Fellowship. This fund was established to attract top-quality students to graduate degree programs in commerce and business administration. Academic quality and merit take precedence over all other considerations in selecting recipients. Contact: Director of Graduate Programs (or the department head/director of any academic department or program in the School), Box 870223, Tuscaloosa, AL 35487-0223.

Raymon J. Baker MBA Student Endowed Scholarship in Investment Banking. Priority of consideration shall be given to graduate students enrolled in the Culverhouse College of Commerce and Business Administration who are seeking a master of business administration degree with an emphasis in investment management. Contact: Director of MBA Program, Box 870223, Tuscaloosa, AL 35487-0223.

James O. Banks Endowed C&BA Scholarship. Established by James O. and Ann H. Banks to promote the education of graduate and undergraduate accounting students. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Becker CPA Review Course Award. Awarded to a graduating senior or graduate student. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

J. L. Bedsole Memorial Endowed Fellowship. Provides fellowship awards to promote the education of exceptional graduate students in any academic program in the School. Recipients are distinguished as J. L. Bedsole Scholars. Contact: Director of Graduate Programs (or the department head/director of any academic department or program in the School), Box 870223, Tuscaloosa, AL 35487-0223.

Culverhouse School of Accountancy Benefactor Award. Awarded to an undergraduate or graduate student in good standing and majoring in accounting. Financial need is a primary factor. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL
Emily S. and Lee Bidgood Memorial Endowed Fellowship. Established by the Bidgood children to honor the memory of their parents and to promote the education of outstanding graduate students in commerce and business administration. Recipients are recognized as Bidgood Scholars. Contact: Director of Graduate Programs (or the department head/director of any academic department or program in the School), Box 870223, Tuscaloosa, AL 35487-0223.

Young J. Boozer Endowed Graduate Student Fellowship. Established by Colonial BancGroup Inc. to honor the memory of Mr. Young Boozer and to promote the education of full-time graduate students in commerce and business administration. Contact: Director of Graduate Programs (or the department head/director of any academic department or program in the School), Box 870223, Tuscaloosa, AL 35487-0223.

Fred Bostick Endowed Fellowship. Established by the Bostick family to promote the education of students pursuing courses of study leading to graduate degrees in commerce and business administration. Recipients are distinguished as Bostick Scholars. Contact: Director of Graduate Programs (or the department head/director of any academic department or program in the School), Box 870223, Tuscaloosa, AL 35487-0223.

Wilbur J. Bradford Scholarship. Awarded annually to an outstanding accounting student. Financial need is considered. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Frederic Augustin Brett Memorial Endowed Scholarship. Established by Elizabeth Maye J. Brett in memory of her husband to promote the education of deserving students pursuing doctoral degrees in accounting or management. Contact: Director of Graduate Programs, Director of the Culverhouse School of Accountancy, or Head of the Department of Management and Marketing, Box 870223, Tuscaloosa, AL 35487-0223.

Ehney Addison Camp Jr. Memorial Endowed Scholarship. Established in 1993 to promote the education of full-time, needy, and qualified students preparing for careers in business. Priority consideration is given to MBA students. Contact: Director of Graduate Programs or Director of MBA Program, Box 870223, Tuscaloosa, AL 35487-0223.

Robert G. Campbell Class of 1936 Endowed Scholarship. Established in 1999 to promote the education of full-time graduate students in the Manderson Graduate School of Business. Contact: Director of Graduate Programs or Director of MBA Program, Box 870223, Tuscaloosa, AL 35487-0223.

Cap Gemini Ernst & Young MBA Health Care Scholarship. Priority of consideration shall be given to second-year students enrolled in the MBA Program in the Manderson Graduate School of Business who have undergraduate backgrounds or licensing in health care management or nursing, and/or to students enrolled in the MBA/M.S.N. Program in the Capstone College of Nursing. Contact: Director of MBA Program, Box 870223, Tuscaloosa, AL 35487-0223.

Comer Foundation Graduate Fellowship. Supports truly deserving graduate students pursuing master's or doctoral degrees in commerce and business administration. Contact: Director of Graduate Programs (or the department head/director of any academic department or program in the School), Box 870223, Tuscaloosa, AL 35487-0223.

Delchamps Endowed Scholarship for Marketing. Established by Delchamps Incorporated to support undergraduate and graduate students pursuing a degree in marketing, with priority consideration given to students from Alabama, Georgia, Mississippi, Louisiana, and Tennessee. Contact: Head of the Department of Management and Marketing, Box 870225, Tuscaloosa, AL 35487-0225.

Sara Elliott Donahoo Memorial Endowed Accounting Scholarship. Established by J. Wesley Donahoo to honor his first wife and to promote the graduate and undergraduate education of students majoring in accounting. Contact: Director, Culverhouse School of
Donaldson, Holman & West, PC Accounting Scholarship. Awarded annually to an accounting major. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Mark and Dawn Dunning Endowed C&BA Master's in Business Administration Scholarship. Established in 1996 to promote the education of full-time MBA students in the Manderson Graduate School of Business. Recipients are selected based on scholastic merit and leadership. Contact: Director of MBA Program, Box 870223, Tuscaloosa, AL 35487-0223.

Durr-Fillauer Endowed Graduate Fellowship. Established by Durr-Fillauer Medical Inc. to award fellowships to outstanding students pursuing graduate degrees in commerce and business administration. Contact: Director of Graduate Programs (or the department head/director of any academic department or program in the School), Box 870223, Tuscaloosa, AL 35487-0223.

El Paso Corporate Foundation Endowed Diversity Accounting Scholarship. El Paso Corporate Foundation Scholars receive in-state tuition and must be full-time accounting majors; junior, senior, or graduate status; a member of a population group that is underrepresented in C&BA; selection made on the basis of merit, scholarship, character, and/or leadership qualities; must have demonstrated solid academic promise and have a minimum GPA of 3.0 or higher or be deemed otherwise academically acceptable by the University. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0330.

Ernst and Young Accounting Scholarship. A scholarship for an accounting major of junior standing or a candidate for an accounting master's degree. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Federal Tax Clinic Scholarship. Awarded to an incoming master of tax accounting student. GPA, GMAT score, and overall potential for success are considered. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Federation of Schools of Accountancy Student Award. Awarded to a graduating master's student in accounting. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

First Alabama Bank Endowed C&BA Scholarship for Productivity and Quality Enhancement. Established in 1993 by First Alabama Bancshares to support both scholarly work that directly benefits the economic well-being of the state and students assisting business and industry through the activities of the Alabama Productivity Center. Contact: Director, Alabama Productivity Center, Box 870318, Tuscaloosa, AL 35487-0318.

Paul Garner Graduate Accounting and Research Award. An award for an accounting graduate student. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Robert W. Hodgkins Endowed C&BA Scholarship. This scholarship is awarded to deserving C&BA students who intend to concentrate in the area of insurance. Contact: Head of the Department of Economics, Finance, and Legal Studies or Director of Graduate Programs, Box 870223, Tuscaloosa, AL 35487-0223.

C. E. Hornsby Jr. and Emily Jones Hornsby Endowed Scholarship. Established in 1998 to promote the education of full-time graduate and undergraduate students in the College of Commerce, with preference to graduates of Bibb County, Alabama, high schools. Contact: Director of Graduate Programs or Director of Undergraduate Programs, Box 870223, Tuscaloosa, AL 35487-0223.

Ingram-Reid Endowed Accounting Scholarship. Established by Professor Robert W. and Christine M. Ingram in honor of their parents to promote the education of graduate and
undergraduate accounting students. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

**Jackson, Thornton and Company Scholarship.** Awarded annually to an accounting major. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

**Maxie Glen Jackson Memorial C&BA Scholarship.** The Alabama Chapter of the Risk and Insurance Management Society provides this scholarship to deserving full-time C&BA students with an interest in the area of insurance. Contact: Head of the Department of Economics, Finance, and Legal Studies or Director of Graduate Programs, Box 870223, Tuscaloosa, AL 35487-0223.

**Bill Jessup Endowed Scholarship.** A scholarship for a graduate or undergraduate student in accounting. The award is renewable. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

**Sally R. and Laurens W. Jones Endowed Scholarship.** Awarded to students who have been accepted into the master of accountancy program in the Culverhouse School of Accountancy. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

**L. Paul Kassouf & Company Scholarship.** Awarded to an undergraduate or graduate student in accounting desiring to enter public accounting. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

**Dr. Saburo Kawai Endowed Scholarship.** Established in 1998 by Dr. Saburo Kawai of Tokyo, Japan, to promote international business in a global economy by means of promoting the education of deserving full-time graduate students in the Culverhouse College of Commerce and Business Administration. Priority consideration is given to students expressing an interest in Japanese business or culture who intend to pursue master's degrees, with preference to MBA students specializing in insurance or finance. Contact: Director of Graduate Programs or Director of MBA Program, Box 870223, Tuscaloosa, AL 35487-0223.

**Chester Knight Memorial Scholarship.** A scholarship awarded to an accounting major of junior, senior, or graduate standing. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

**KPMG Peat Marwick Endowed Accounting Scholarship.** Awarded annually to an accounting student. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

**Allen J. Lambert Annual Accounting Award in C&BA.** Awarded to a fifth-year student (master's level) who intends to sit for the CPA exam. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

**Joe Lane Memorial Endowed Accounting Scholarship.** Established in memory of Professor Emeritus Joseph E. Lane Jr. to promote the education of graduate and undergraduate accounting students. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

**Lewis Manderson Graduate School of Business Scholarship.** Established in 1994 to promote graduate education in commerce and business administration and to support qualified minority students who have high potential for success in graduate study in business. Contact: Director of Graduate Programs or Director of MBA Program, Box 870223, Tuscaloosa, AL 35487-0223.

**Lewis Manderson MBA Fellowship.** A competitive award for exceptionally well-qualified MBA students. Provides an annual scholarship award of $4,470 plus one-half of the student's University tuition. Contact: Director of MBA Program, Box 870223, Tuscaloosa, AL 35487-0223.
Marvin L. Mann Endowed C&BA Graduate Scholarship. Established in 1999 through a gift from Lexmark International to honor the retirement of Lexmark's first chairman and chief executive officer, and University alumnus, Marvin L. Mann, and to promote the education of deserving graduate students in the Manderson Graduate School of Business. Contact: Director of Graduate Programs or Director of MBA Program, Box 870223, Tuscaloosa, AL 35487-0223.

Charles Irving Massey Endowed Graduate MBA Scholarship. Established by Mr. Charles Rayford Massey to promote the education of exceptional students pursuing MBA degrees. Recipients are recognized as Massey Scholars. Contact: Director of MBA Program, Box 870223, Tuscaloosa, AL 35487-0223.

Master of Accountancy Endowed Scholarship. Awarded to students who have been accepted into the master of accountancy program in the Culverhouse School of Accountancy. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Master of Tax Accounting Alumni Endowed Fellowship. Awarded to a student accepted into the master of tax accounting program. Scholarship, leadership, and financial need are considered. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Mauldin & Jenkins Accounting Scholarship. Awarded annually to an accounting major. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Minnie C. Miles Human Resources Management Endowed Graduate Scholarship. Established to promote the education of full-time students pursuing graduate degrees in management. Contact: Head of the Department of Management and Marketing, Box 870223, Tuscaloosa, AL 35487-0223.

Minnie Cadell Miles Endowed Graduate Scholarship. Awarded to a master's degree candidate, with preference to the behavioral area. Contact: Director of Graduate Programs or Head of the Department of Management and Marketing, Box 870225, Tuscaloosa, AL 35487-0225.

National Alumni Association Graduate Scholarship Program. The National Alumni Association provides funds for $1,000 scholarships for students in any business discipline. Priority consideration is given to first-year master's degree students. Contact: Director of Graduate Programs, Box 870223, Tuscaloosa, AL 35487-0223.

Larry E. Newman-Ernst & Young Endowed Accounting Scholarship. Priority awarded to undergraduate or graduate students who have been accepted into the accounting program in the Culverhouse School of Accountancy, and have demonstrated either academic merit or financial need, although not necessarily financial need as defined by federal guidelines. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Roy C. Ossman National Food Brokers Association Foundation Scholarship. A $1,000 scholarship awarded to a student at the undergraduate or graduate level who is interested in a career in the food industry. Scholastic ability, character, and financial need will be considered in selecting the recipient. Contact: Head of the Department of Management and Marketing, Box 870225, Tuscaloosa, AL 35487-0225.

O'Sullivan Creel, LLP Accounting Scholarship. Awarded annually to an accounting major. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Timothy M. Parker Sr. and Thelma F. Parker Endowed Scholarship. Provides scholarships to graduate students who are either Alabama natives or graduates of Alabama high schools. Financial need is considered in making awards. Contact: Director of MBA Program or Director of Graduate Programs, Box 870223, Tuscaloosa, AL 35487-0223.
Culverhouse School of Accountancy Patron Scholarship. Awarded to full-time undergraduate or graduate student enrolled in the Culverhouse School of Accountancy in good academic standing. Need is a consideration. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Pearce, Bevill, Leesburg, and Moore Accounting Scholarship. Awarded to a declared accounting major or an accounting equivalency major who has completed the intermediate-level accounting courses, and has a minimum 3.25 GPA in accounting. Student must be actively involved in at least one professional organization such as, but not limited to, Beta Alpha Psi. Financial need will be the deciding factor where there are students of otherwise equal merit. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

John Howell Pearson Endowed Scholarship in Accounting. Established by Jack H. and Sue A. Pearson in memory of their son, John Howell Pearson, to promote the education of students who intend to pursue degrees in accounting; who have demonstrated strong character and commitment, as evidenced by involvement in community activities, school activities, and/or employment; and who have minimum GPAs of 2.5. Priority of consideration shall be given to students from the state of Alabama. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Dr. A. J. Penz Endowed Graduate Accounting Scholarship. Established by Dr. A. J. Penz to promote the education of accounting graduate students. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

PricewaterhouseCoopers-Joe Lane Accounting Scholarship. An award for an accounting major of junior standing or a candidate for a master's degree who is judged to have outstanding potential for success in public accounting. Must have a minimum overall GPA of 3.3, oral and written communication skills, an ability to interact with people, and leadership qualities as demonstrated by positions of responsibility in campus, civic, or service organizations. Contact: Director of the Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Professional Advisory Board Graduate Scholarship. Awarded to fifth-year incoming (master of accountancy or master of tax accountancy) accounting students. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Roland Pugh Endowed MBA Scholarship in Family Business and Entrepreneurship. Established in 1998 by Mr. Roland Pugh to promote the education of deserving full-time graduate students in the Manderson Graduate School of Business. Priority consideration is given to MBA students who are concentrating in family business and entrepreneurship. Contact: Director of MBA Program, Box 870223, Tuscaloosa, AL 35487-0223.

Mike and Julie Ranney Accounting Scholarship. Awarded annually to an accounting major. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

J. Ronald Renzetti Sr. MBA Endowed Fellowship. Established to promote the education of exceptional students pursuing MBA degrees. Recipients are recognized as Renzetti Scholars. Contact: Director of MBA Program, Box 870223, Tuscaloosa, AL 35487-0223.

John L. and Margaret E. Rhodes Endowed Scholarship in Accounting. Awarded to students enrolled in C&BA and accepted into the Culverhouse School of Accountancy who have demonstrated either academic excellence or financial need. Contact: Director of the Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Martha Lou Jones Riddle Endowed MBA Scholarship. Established by Kenneth A. Riddle to honor his wife and to promote the education of deserving full-time graduate students pursuing MBA degrees. Contact: Director of MBA Program, Box 870223, Tuscaloosa, AL 35487-0223.
Steven J. Ross Endowed Graduate Accounting Scholarship. Established by the Ross Family Charitable Foundation in honor of Steven J. Ross to promote the education of graduate students in accounting. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Sales and Marketing Executives of Birmingham Inc. Fellowship. A gift scholarship for outstanding seniors or graduate students interested in sales and marketing. Contact: Head of the Department of Management and Marketing, Box 870225, Tuscaloosa, AL 35487-0225.

William Samson Memorial Accounting Scholarship. Awarded annually to an accounting major. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Savela & Associates Scholarship. Awarded annually to a master of accountancy student. Preference is based on academic performance and “well-roundedness” as reflected in the candidate’s extracurricular activities. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Sellers, Richardson, Watson, Haley and Logan Accounting Scholarship. Awarded annually to an accounting major with a 3.5 or higher who intends to work in the Birmingham, Alabama area. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Young Ho Shin Endowed Scholarship. Established through a gift from the Daehan Kyoyuk Insurance Company Ltd. to promote international business in a global economy. Priority consideration is given to Korean graduate students who intend to pursue master’s or doctoral degrees specializing in the field of insurance or finance. Contact: Head of the Department of Economics, Finance, and Legal Studies or Director of Graduate Programs, Box 870223, Tuscaloosa, AL 35487-0223.

Clarence DeWitt Smith Memorial Scholarship. Awarded to a student in applied statistics. Contact: Head of the Department of Information Systems, Statistics and Management Science Scholarships, Box 870226, Tuscaloosa, AL 35487-0226.

Morris “Munny” Sokol Endowed Memorial C&BA Scholarship. Established by Mr. Aaron Aronov, former trustee of The University of Alabama, in honor of civic leader Munny Sokol to support students enrolled in the Culverhouse College of Commerce and Business Administration. Contact: Director of Graduate Programs (or the department head/director of any academic department or program in the College), Box 870223, Tuscaloosa, AL 35487-0223.

Curtis Springer Scholarship. Established by the Alabama Dairy Products Association of Greensboro in 2001, this award is given annually to full-time graduate students in Marketing pursuing a concentration in distribution and supply chain management. Contact: Head, Department of the Management and Marketing, Box 870225, Tuscaloosa, AL 35487-0225.

Charles William Stephan Endowed MBA Scholarship. Established in 1998 to be used for the betterment of MBA students in the Manderson Graduate School of Business. Contact: Director of MBA Program, Box 870223, Tuscaloosa, AL 35487-0223.

Elton B. Stephens Sales and Sales Management Scholarships. Awarded annually to undergraduate or graduate marketing majors. Contact: Head of the Department of Management and Marketing, Box 870225, Tuscaloosa, AL 35487-0225.

Fred & Dot Thompson Accounting Scholarship. Established by Professor Mary S. Stone in honor of her parents to promote the education of graduate and undergraduate accounting students. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

Sue and Stanley Virciglio Accounting Scholarship. Established by Beverly S. Virciglio in 1996.
honor of her parents to promote the education of students in the College of Commerce and Business Administration. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

**Way, Ray, Shelton & Company-ASCPA Scholarship.** Awarded annually to an accounting student. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

**Marcus Whitman Endowed Graduate Fellowship.** Established by Dr. Marcus Whitman, professor emeritus of finance, to promote the education of deserving graduate students in commerce and business administration. Overall merit of the recipient is the primary consideration. Preference is given to students pursuing graduate degrees in finance. Contact: Director of Graduate Programs or Head, Department of Economics, Finance, and Legal Studies, Box 870223, Tuscaloosa, AL 35487-0223.

**James W. Wilson Sr. Memorial Endowed Scholarship in Tax Accounting.** Priority to a Master of Tax Accounting student based on academic achievement and financial need. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

**Murray D. Wood-Joe Lane Graduate Fellowship.** Established by Murray D. Wood to honor Professor Joe Lane and to promote the education of outstanding students in graduate study in tax accounting. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487-0220.

**College of Communication and Information Sciences — School of Library and Information Studies**

**Alabama Public Library Service Scholarships.** Scholarships of up to $250 per credit hour for employees of Alabama public libraries who are pursuing graduate library and information studies degrees on a part-time basis. Contact: Scholarship Committee, Alabama Public Library Service, 6030 Monticello Drive, Montgomery, AL 36130 ; 1-800-723-8459 and ask for Jim Smith. Application deadline: May 1.

**Alabama Library Association Scholarships.** Awarded to promising Alabama students who wish to pursue graduate degrees accredited by the American Library Association or by the National Council for Accreditation of Teacher Education. Contact: Alabama Library Association Scholarship and Loan Fund, (334) 262-5210 or allaonline@mindspring.com. Application deadline: June 1.

**Martha Jule Blackshear Scholarship.** Awarded annually to a student in SLIS who is planning a career in public or school librarianship and providing evidence of this commitment through prior work experience.

**Marie Drolet Bristol Endowed Scholarship.** Awarded annually to one or more SLIS students, based on scholastic potential and financial need.

**Corr Scholarship.** Awarded to students currently enrolled in SLIS and pursuing specializations in school or youth services. Awarded on Honors Day.

**Barbara Doughty Scholarship.** Awarded to a student in SLIS on the basis of scholastic potential.

**Mary Elizabeth Webster Edwards Scholarship.** Awarded annually to students in SLIS on the basis of scholastic potential and need.

**Bethel Fite Endowed Scholarships for Part-Time Students in SLIS.** Awarded on Honors Day to a part-time student pursuing an MLIS degree.

**Cherie D. Feenker Law Librarianship Scholarship.** Awarded annually to a student
planning a career in law libraries.

**Pauline M. Foster Endowed Scholarship.** Awarded annually to a student from Alabama specializing in school librarianship.

**Mary Lou Jones Griffin Scholarship.** Awarded to a student in SLIS on the basis of scholastic potential and need.

**Mildred and Karl Harrison Endowed Scholarship in SLIS.** Awarded annually to a student in SLIS based on scholastic potential and financial need.

**Elizabeth Melton Lee Endowed Scholarship.** Awarded to a student in SLIS on the basis of scholastic potential and financial need.

**Library School Association Endowed Graduate School Scholarship.** Awarded annually to a student in SLIS based on scholastic potential and financial need.

**Mary Sue McGarity Endowed Scholarship.** Awarded to a student in SLIS on the basis of scholastic potential and need.

**MLIS Faculty Scholar Endowed Award.** Awarded on Honors Day to an outstanding SLIS student in recognition of academic excellence, outstanding service, and professional promise.

**James D. Ramer Endowed Outstanding Doctoral Dissertation Award in SLIS.** $1,000 awarded to a doctoral student in SLIS based on the quality of his or her dissertation. Awarded on Honors Day.

**James D. Ramer Scholarship.** Awarded to students in SLIS to help defray the cost of summer school study.

**Jewell Sandoval Endowed Student Support Fund in SLIS.** Established by the Library School Association for students in SLIS to support student research and special projects.

**Fannie Schmitt Scholarship.** Awarded annually to students in SLIS on the basis of scholastic potential and financial need.

**SLIS Minority Quasi-Endowed Scholarship.** Awarded annually to students in SLIS who are members of a minority group.

**Bernice Stacy Endowed Scholarship.** Awarded annually to a student in SLIS on the basis of scholastic potential and financial need.

**Annabel and Nell K. Stephens Memorial Endowed Scholarship.** Awarded to a student in SLIS on the basis of career potential and financial need. Preference is given to a student pursuing a career in public librarianship in Alabama.

**Elton B. Stephens Scholarship.** Awarded annually on the basis of academic achievement and merit to a doctoral student in SLIS.

**George R. Stewart Endowed Scholarship.** Awarded annually to a student in SLIS based on scholastic potential and financial need.

**Ruth Waldrop Part-Time Student Endowed Scholarship in SLIS.** Established by the Library School Association. Awarded to graduate students pursuing degrees in SLIS on a part-time basis.

**Annie Ford Wheeler Endowed Scholarship.** Awarded annually to a student in SLIS based on scholastic potential and financial need.

**H. W. Wilson Endowed Scholarship.** Awarded annually to a student in SLIS based on
scholastic potential and financial need.

**Kenda Wise Endowed Scholarship in SLIS.** Awarded annually based on scholastic potential and financial need.

**Powers-Meriam Wyman Endowed Scholarship.** Awarded annually to a student in SLIS based on scholastic potential.

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**College of Continuing Studies**

Information on the following awards can be obtained by contacting the College of Continuing Studies, Adult Student Programs, Box 870388, Tuscaloosa, AL 35487-0388.

**Robert M. and Muriel R. Barksdale Endowed Scholarship.** Awarded to part-time or full-time undergraduate or graduate students, with priority given to employees and their dependents of Barksdale-Warrior Paper Company who plan to enroll in academic programs facilitated through the College of Continuing Studies; secondary consideration will be given to applicants from the West Alabama area, at least 25 years old, who demonstrate satisfactory academic progress and who are enrolled in programs facilitated through the College of Continuing Studies. Amount is variable.

**William E. Bright Endowment for the Support of Natural Gas Programs & Scholarships.** Applicant must be an employee or the dependent of an employee of a member company of Alabama Natural Gas Association; part-time or full-time undergraduate or graduate student, either currently enrolled or accepted for admission to The University of Alabama; be an Alabama resident; demonstrate academic excellence; exhibit outstanding leadership qualities and establish financial need (not as necessarily as defined by Federal guidelines); preference will be given to students who are taking courses facilitated through the College of Continuing Studies. Amount is variable.

**James C. Caldwell Endowed Scholarship.** Awarded to part-time or full-time undergraduate or graduate students. Priority will be given to applicants from Winston and Marion counties; secondary consideration will be given to deserving applicants who are enrolled in academic programs facilitated through the College of Continuing Studies. Demonstration of financial need (not necessarily as defined by federal guidelines) may also be a consideration for the award. Amount is variable.

**General Charles G. Cleveland –Maxwell Air Force Base Endowed Scholarship.** Awarded to a University of Alabama undergraduate or graduate student who is currently admitted or accepted for admission; who is currently in the Air Force or other U.S. Armed Forces, and pursuing a degree facilitated by the College of Continuing Studies, who is in good academic standing (3.0 GPA or higher). Preference will be given to persons stationed or employed at Maxwell Air Force Base in Montgomery, AL. Amount is variable.

**College of Continuing Studies Endowed Scholarship.** Awarded to part-time or full-time undergraduate or graduate students who are enrolled in academic degree programs facilitated through the College of Continuing Studies, who demonstrate financial need, although not necessarily defined by federal guidelines, and who exhibit academic excellence. Amount is variable.

**Thomas S. Graves Memorial Endowed Scholarship.** Awarded to a part-time or full-time undergraduate or graduate student with demonstrated academic excellence who is an Alabama resident and currently enrolled or accepted for admission. A minimum 3.0 GPA, a major in a science-based curriculum, and enrollment in at least one College of Continuing Studies course during the semester in which the award is received are required. Priority will be given to the residents of Etowah and Cherokee counties. Secondary consideration will be given to applicants from any other academic division. The scholarship is merit-based; financial need is not a requirement. Amount is variable.
Jack and Audrey Hetmaker Memorial Endowed Scholarship. Awarded to a University of Alabama undergraduate or graduate student who is a resident of the state of Alabama, who is currently enrolled or accepted for admission and is pursuing a degree in business though programs facilitated by The College of Continuing Studies. Amount is variable.

Kay H. Hodges Memorial Endowed Scholarship. Awarded to a University of Alabama student, undergraduate or graduate, who is enrolled or accepted for admission to the Nursing program facilitated through the College of Continuing Studies. First priority will be given to students from Cobb County, GA or Etowah and Tallapoosa counties in the state of Alabama. Student must demonstrate financial need, but not necessarily as defined by federal financial aid guidelines. Amount is variable.

James A. Hood Endowed Scholarship. Awarded to a full-time University of Alabama graduate or undergraduate student who is currently enrolled or has been accepted for admission. The applicant must be at least 25 years old, a resident of Alabama, and a graduate of the state's public school system. The applicant must be pursuing a degree as a teacher or school administrator and be planning to enroll in academic programs facilitated through the College of Continuing Studies. Amount is variable.

Jerold Kennedy Memorial Endowed Scholarship. Awarded to part- or full-time undergraduate or graduate students who are at least 25 years old and who are enrolled in academic programs facilitated through the College of Continuing Studies, with preference given to students pursuing degrees in disciplines served by the College of Continuing Studies. Amount is variable.

King-Blackburn Friends of the Alabama Gulf Coast Endowed Scholarship. Awarded to a University of Alabama undergraduate or graduate student who is currently admitted or accepted for admission; who graduated from high schools in Baldwin, Mobile, Escambia Counties or adjacent counties; who have incurred hardships as a result of hurricanes or other natural disasters; who is in good academic standing (3.0 GPA or higher) and pursuing a degree through programs facilitated by the College of Continuing. Amount is variable.

Colonel Floyd H. Mann Memorial Endowed Scholarship. Awarded to an undergraduate or graduate student, part- or full-time, who is enrolled at The University of Alabama or accepted for admission. Priority will be given to students who are children of law enforcement officials and/or who intend to pursue careers in law enforcement and who demonstrate financial need (not necessarily as defined by federal guidelines). Amount is variable.

John Cook Nichols Endowed Scholarship. Awarded to a University of Alabama undergraduate or graduate student who is currently admitted or accepted for admission and enrolled in a degree program facilitated through the College of Continuing Studies, exhibit academic excellence, and demonstrate financial need (not necessarily as defined by federal guidelines). Amount is variable.

Clarice L. Parker Memorial Endowed Scholarship. Awarded to a part-time or full-time undergraduate or graduate student, currently enrolled or accepted for admission. An applicant must be at least 25 years old and a resident of Alabama, have a GPA of 2.5 or above for the previous semester, be enrolled in at least one College of Continuing Studies course during the semester in which the award is received, and demonstrate financial need. Primary preference will be given to students from Tuscaloosa County. Applicants must also file a Free Application for Federal Student Aid (FAFSA) form. Amount is variable.

Douglas W. Patterson Memorial Endowed Scholarship. Awarded to a part-time or full-time University of Alabama graduate or undergraduate student who is currently enrolled or has been accepted for admission. An applicant must be at least 25 years old and enrolled in academic programs facilitated through the College of Continuing Studies. Amount is variable.

William Henry Rhea Jr. Memorial Endowed Scholarship. Awarded to a part-time or full-time undergraduate or graduate student who is an Alabama resident at least 25 years old and who has demonstrated academic excellence (minimum GPA of 3.0) and established financial need. Preference will be given to students majoring in engineering or business who are taking courses facilitated through the College of Continuing Studies. Amount is variable.
**Warrior Roofing-Thomas G. Shurett Endowed Scholarship.** Awarded to a full-time undergraduate or graduate student who is currently enrolled or accepted for admission and an Alabama resident. Priority will be given to students intending to enroll in academic programs facilitated through the College of Continuing Studies during the term in which the award is received. Preference will be given to employees (or dependents of employees) of Warrior Roofing Company Inc. and students from West Alabama. Amount is variable.

**John C. Snider Scholarship.** Awarded to part-time or full-time undergraduate or graduate students who are at least 25 years old, who are enrolled in academic programs facilitated through the College of Continuing Studies, and who demonstrate satisfactory academic progress. Amount is variable.

**Ruth P. Snider Memorial Scholarship.** Awarded to part-time or full-time undergraduate or graduate students who are at least 25 years old and are enrolled in academic programs facilitated through the College of Continuing Studies, with preference given to students with a major or minor in music, music education, or a related field. Recipient must demonstrate satisfactory academic progress. Amount is variable.

**Hershel Trimm Memorial Endowed Scholarship.** Awarded to a part-time or full-time undergraduate or graduate student who is currently enrolled or accepted for admission. An applicant must be at least 25 years old and a resident of Alabama, have a GPA of 2.5 or above for the previous semester, and be enrolled in at least one College of Continuing Studies course during the semester in which the award is received. Priority will be given to those who desire careers in the home-building industry. Amount is variable.

**Robert L. Williamson Endowed Memorial Scholarship.** Awarded to a University of Alabama undergraduate or graduate student over the age of 25 who is majoring in engineering or business and is facilitating his or her education through the College of Continuing Studies and its Division of Academic Outreach. Priority will be given to undergraduate students who are taking at least one course through QUEST (Quality University Extended Site Telecourses) or other distance learning methods. Must demonstrate academic excellence (GPA of 3.0 on a 4.0 scale) and show financial need. Amount is variable.

**Jerry F. Wilson Sr. Memorial Endowed Scholarship.** Awarded to an undergraduate or graduate student enrolled part- or full-time who is at least 25 years old; enrolled at The University of Alabama or accepted for admission; and enrolled in an academic program facilitated through the College of Continuing Studies. Preference is given to students pursuing degrees in disciplines served through the Academic Outreach division of the College of Continuing Studies. Amount is variable.

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**College of Education**

Scholarships available through this office for full-time graduate education students range from $350 to $2,000. For its purposes, the College's graduate scholarship committee defines a full-time graduate student as a student enrolled in at least 9 credit hours per semester for an academic year. A graduate teaching or research assistant is considered to be a full-time student if he or she is enrolled in 6 or more credit hours per semester for an academic year. The following information must be submitted to the office of the scholarship steward no later than the deadline date printed on the application form:

- cover letter
- application form
- statement of purpose
- official transcript(s)
- two letters of recommendation
- vita or résumé
- statement of financial need (if applicable)
A detailed description of each component of the application is included on the College's webpage for scholarships.

Scholarship recipients are selected annually during the spring semester that precedes the academic year to which the award will be applied. All applicants will be notified by letter of the disposition of their applications within two weeks prior to the College of Education Honors Day convocation in April. Recipients will be announced during the convocation.

Generally, scholarships are awarded for one academic year; however, some may be renewable, offering the recipient an opportunity to receive funding for one or more subsequent years. A recipient must request consideration for continuation in a letter submitted with an updated application. Renewal requests are subject to review and evaluation by the scholarship committee. A request does not guarantee renewal. A nonrenewable scholarship will not be awarded to an individual more than once.

Each scholarship is awarded in two equal installments. One installment is made during the fall semester; the other is made during the spring. Receipt of the second installment is contingent upon the recipient's continued maintenance of the eligibility requirements established by the respective scholarship.

Questions about the application or the application process should be directed to the scholarship steward. More information about graduate-level College of Education scholarships and an accompanying application form are available online at www.education.ua.edu. The mailing address for the scholarship steward is Box 870231, Tuscaloosa, AL 35487-0231; the telephone number is (205) 348-6073.

**Sandra R. Apolinsky Memorial in Counselor Education:** Doctoral student in Counselor Education; priority given to returning female students after meeting family obligations

**Susan Duckworth Bedsole Scholarship:** Priority given to J. L. Bedsole Scholars as selected by the J.L. Bedsole Foundation; students from southwest Alabama; students accepted into the College of Education

**Dr. Harold L. Bishop Endowed Scholarship:** Priority of consideration shall be given to graduate students enrolled in the College of Education who have been unconditionally accepted and are studying school administration. Financial need shall also be considered, although not necessarily as defined by federal guidelines. (not available until 2010-11)

**Russell S. and Mary Louise Cantwell Endowed History Scholarship:** Graduate or undergraduate student majoring in Social Sciences (History); GPA of 3.0+; financial need; renewable

**Jean H. Cecil Memorial Endowed Scholarship:** Graduate student majoring in Counselor Education; competitive GPA

**Laura and James Condra Endowed Scholarship** First priority of consideration is given to full-time undergraduate and graduate students enrolled in the College of Education. Second priority of consideration is given to students who demonstrate financial need; renewable.

**Ralph W. Cowart Memorial Scholarship:** Competitive GPA; legal resident of Pike County, Alabama; renewable

**Merlin G. Duncan Memorial Endowed Scholarship:** Doctoral student; competitive GPA; personal qualities assuming leadership roles in education (Educational Leadership); potential for making significant contributions to education; renewable

**Betty B. and Edward L. Englebert Endowed Scholarship:** Priority given to education students (undergraduate or graduate) pursing bachelor's degrees in secondary education in the areas of science, math, English language arts, social science, or foreign language; master's degrees in counseling; or doctorates in administration.
Sarah H. Healy Endowed Graduate Scholarship: Graduate student in Higher Education Administration or Educational Leadership; female; short essay detailing academic and professional record together with career goals

Irene Merriwether Jones Memorial Endowed Scholarship: Alabama public school teacher pursuing a Master’s Degree in education; demonstrated financial need (Statement of Financial Need); competitive GPA

Leeman C. Joslin Scholarship in Behavioral Studies: Counselor Education, Educational Psychology, Educational Research, or School Psychology; African American or female or both: competitive GPA; demonstrated financial need (Statement of Financial Need)

Owen and Virginia Liles Endowed Scholarship: Graduate; priority of consideration shall be given to students undertaking a program of study in the College of Education who have two to five years teaching experience with middle school-aged students, and who plan to pursue a career in middle school education. Additional preference shall be given to applicants who are residents of Baldwin, Conecuh, Escambia, or Monroe Counties, Alabama. Applicants must submit an essay discussing a proposed new innovation or enhancement in middle school education; also include letters of recommendations from a school administrator who supervised applicant and from parents of former students.

James E. McLean Endowed Graduate Scholarship Criteria: Priority of consideration shall be given to full-time graduate students in the COE.

Paul G. Orr Memorial Fellowship in Educational Administration with priority to Educational Leadership: Applicants should be U.S. or foreign nationals who plan to teach or work in American-Sponsored Overseas Schools (ASOS) or foreign national education systems. The recipient shall agree to make every effort to work in either type of system for no less than three (3) years from the date of an awarded degree or completion of course work. Competitive GPA; renewable for a maximum of two academic years only; one of the three letters of recommendation to be submitted must be written by the director of the school that has most recently employed the applicant: demonstrated financial need (Statement of Financial Need)

Anna and Harold Paige Scholarship Fund Criteria: Priority of consideration given to graduate students enrolled in the College of Education who demonstrate financial need, although not necessarily need as defined by federal guidelines.

Daniel Evan Parker Endowed Scholarship: First priority of consideration shall be given to full-time graduate students who are pursuing doctoral degrees in educational leadership studies through the Department of Educational Leadership, Policy, and Technology Studies in the College of Education. Second priority of consideration shall be given to other full-time graduate students pursuing degrees through the College of Education.

Thelma Julia Mildred Smith Endowed Scholarship in Counselor Education: Graduate; indication of plans for a career as an elementary or secondary guidance counselor; competitive GPA; personal qualities for assuming leadership roles in education; demonstrated financial need (Statement of Financial Need); renewable

Esther J. Swenson Endowed Scholarship: Doctoral student majoring in Early Childhood/Elementary Education; competitive GPA; personal qualities for assuming leadership roles in education; potential for making significant contributions to education. Application Dates: October 1st – only on even years of the fall semester, alternating with the Thompson Scholarship.

Paul W. Terry Memorial Endowed Scholarship: Graduate student in Educational Psychology; competitive GPA; renewable

Yewell R. Thompson Endowed Scholarship: Early Childhood/Elementary Education major; priority given to male students actively pursuing a doctoral degree, specialist, masters,
bachelors (in that order); personal qualities for assuming leadership roles in education; potential for making significant contribution to education. Application Dates: October 1st – only in odd years of the fall semester, alternating with the Swenson Scholarship.

**TCI Companies Choice Award in Education Endowed Scholarship:** Graduate or undergraduate student; competitive GPA; legal Alabama resident; applicants must submit a short essay on having inspired others to fulfill their potential in order to demonstrate that the applicant has the passion and energy to influence people’s lives as is expected of teachers.

**The College of Education Retired Faculty Endowed Scholarship:** Priority of consideration shall be given to full-time undergraduate and graduate students enrolled in the College of Education who demonstrate financial need, although not necessarily as defined by federal guidelines, and whose academic records indicate a high probability of success. Additional preference shall be given to those students who are descendents of faculty members of the College of Education.

**College of Human Environmental Sciences**

**Agnes Ellen Harris Scholarship.** This scholarship is awarded on the basis of academic achievement and merit, as determined by the scholarship committee. Eligibility is restricted to full-time graduate students majoring in an area in human environmental sciences. Contact: Dean, College of Human Environmental Sciences, Box 870158, Tuscaloosa, AL 35487-0158.

**Mabel Hewitt Lynch Scholarship.** This scholarship is awarded on the basis of academic achievement and merit, as determined by the scholarship committee. Eligibility is restricted to full-time graduate students majoring in clothing and textiles or in interior design. Contact: Head, Department of Clothing, Textiles, and Interior Design, Box 870158, Tuscaloosa, AL 35487-0158.

**Thompson-Bramblett Scholarship.** This scholarship is awarded on the basis of academic achievement and merit, as determined by the scholarship committee. Eligibility is restricted to full-time graduate students majoring in clothing and textiles or in interior design. Contact: Head, Department of Clothing, Textiles, and Interior Design, Box 870158, Tuscaloosa, AL 35487-0158.

**School of Social Work**

For more information about scholarships for graduate students in the School of Social Work, contact the Associate Dean, School of Social Work, Box 870314, Tuscaloosa, AL 35487-0314. Note that concentration-specific scholarships will change to reflect the new curriculum in Fall 2006.

**Warren G. Augins Endowed Scholarship.** The award supports a full-time, first-year student in the master of social work program who has shown promise in the profession.

**James and Teresa Duggan and James and Elizabeth Ball Endowed Scholarship.** This scholarship assists full-time graduate students in the School of Social Work at The University of Alabama who intend to pursue a master's degree in social work in clinical practice and who are over the age of thirty.

**Lola Louise Bealle Endowed Scholarship.** This scholarship assists full-time students in the School of Social Work.

**Russell and Barbara Beaulieu Endowed Support Fund.** This fund was established to support the Program and Agency Administration academic program as well as to support the needs of selected students enrolled in the School of Social Work, who have financial need, although not necessarily as defined by federal guidelines.

**Doris Bender Memorial Endowed Scholarship.** This scholarship assists deserving MSW students in the School of Social Work.

**Lucille Clark Bennett Endowed Scholarship.** This scholarship assists outstanding MSW
students who have career interests in geriatrics in their second year of study.

**Julia B. Caddell Endowed Scholarship.** This scholarship assists full-time students in the School of Social Work who demonstrate need, although not necessarily as defined by federal guidelines. Second priority goes to adult students enrolled in the School of Social Work who are beginning or continuing their academic educations after entering the work field or to any students enrolled in the School of Social Work who express an interest in health care and/or child care.

**Ehney A. and Mildred Fletcher Tillman Camp Endowed Scholarship.** This scholarship assists outstanding students in the MSW program.

**Daniel Foundation Endowed Scholarships.** These scholarships are awarded annually to outstanding graduates of each of the accredited BSW programs in Alabama who are admitted to the University's advanced-standing MSW program.

**Eulene Hawkins-Alabama Chapter NASW Endowed Scholarship.** This scholarship is for a deserving full-time MSW student in the advanced-standing program. Priority goes to the recipient of the Eulene Hawkins scholarship at Troy University. Second priority goes to an NASW member who exhibits academic excellence.

**Lori Kaye Hebert Endowed Scholarship.** This award assists an MSW student with a career interest in mental retardation and developmental disabilities. Spring semester only.

**Madeleine M. Hill Endowed Graduate Scholarship.** The award assists a full-time student in the master of social work program who is preparing for a career in social work program and agency administration.

**Hill Crest Foundation Inc. Graduate Scholarships.** These scholarships are awarded to master of social work students with a strong interest in a mental-health career.

**Marilyn Brewer Lauber Endowed Scholarship.** This scholarship assists graduate students in the School of Social Work. Peggy Spain McDonald Endowed Scholarship. This scholarship assists a promising student in the MSW program whose home is in the greater Birmingham area.

**Arlene Mitchell Endowed Scholarship.** This scholarship assists outstanding full-time students in the MSW program.

**Ada Kate Morgan Endowed Scholarship.** This scholarship assists full-time students in the MSW program.

**National Alumni Association Scholarship.** This scholarship is awarded to an outstanding incoming student in the MSW program.

**John W. Nixon Fiesta Bowl Endowed Graduate Scholarship.** The scholarship assists African-American students who are pursuing the MSW degree.

**Ben Avis Orcutt Endowed Doctoral Student Scholarship.** This scholarship is awarded to a doctoral student who has displayed outstanding dedication and commitment to the social work profession.

**Nell Hopkins Clarkson and Sue Clarkson Phifer Endowed Scholarship.** This scholarship assists graduate students pursuing the MSW in the School of Social Work.

**Charles S. Prigmore Endowed Graduate Scholarship.** This scholarship assists outstanding MSW students. Priority is given to African-American students with interests in program and agency management.

**Cartis T. and Rose N. Roff Endowed Scholarship.** This scholarship is for an outstanding MSW student.
School of Social Work Stipends. In addition to grants and stipends related to field education agencies, the School of Social Work awards stipends each year to full-time graduate students in the master's degree program.

Leslie J. Shellhase Endowed Scholarship. This scholarship is awarded to an outstanding doctoral student who has been advanced to candidacy for the degree.

Social Work Society-Dean Lucinda Roff Endowed Scholarship. This scholarship is awarded to a full-time student enrolled in the second semester of the concentration year of the master of social work program who shows evidence of superior scholarship, based on graduate grades and an original paper, and evidence of professional citizenship, action, or achievement that furthers the goals of the School and the profession of social work. The scholarship is granted for one spring semester only.

Lorraine Bedsole Tunstall Endowed Scholarship. This scholarship assists outstanding students in the MSW program. Priority is given to students from the Mobile area with interests in careers in child welfare services.

Cassie Wallace-Helen Brown Endowed Scholarship. This scholarship was established to assist full-time students in the School of Social Work who intend to pursue a career in the area of working with elderly or aging people.

Miscellaneous Financial Aid

Loans are administered through the Office of Student Financial Aid, Box 870162, Tuscaloosa, AL 35487-0162. The Free Application for Federal Student Aid (FAFSA) must be on file in the Office of Student Financial Aid before loan approval.

The University's housing office offers counseling positions for qualified graduate students. Inquiries should be addressed to the Office of Residential Life, Box 870399, Tuscaloosa, AL 35487-0399; 1-888-498-2262.

The University's Office of Student Affairs also provides assistantship opportunities in various campus locations to graduate students. Inquiries should be addressed to Graduate Student Services, Office of the Dean of Students, The University of Alabama, Box 870292, Tuscaloosa, AL 35487-0292; (205) 348-6796. Please refer to the Financial Assistance Handbook for details.
3.9 TUITION AND OTHER EXPENSES

The current rates for graduate students can be found at the University’s Cost of Attendance web page.

Application Fees
A nonrefundable application fee must accompany each new application for admission before it will be processed. The application fee for U.S. citizens and permanent residents is $50; for international applicants the fee is $60. Credit card payments may be made with online applications at the Graduate School’s website. After admission, no fee will be assessed for subsequent applications requesting a change of program area, change of degree objective within the program of study, or change of status from non-degree to a degree program. If a student applies but does not enroll within 12 months of the requested entrance date, a new application and an accompanying appropriate fee must be submitted.

Auditing courses
Auditing a course does not affect the rate charged for the course.

Status as an Alabama Resident
The University’s policy on residency can be found in the In-state Residency section of the University Registrar’s website.

Any questions regarding residency should be directed to the Office of Academic Records and University Registrar, 206 Student Services Center, Box 870134, Tuscaloosa, AL 35487-0134 or (205) 348-4886.

Alabama resident status should not be confused with “residency” requirements for completion of master’s, educational specialist, or doctoral degrees. Please refer to those degrees’ respective sections of the Catalog for information on residency requirements for degree purposes.

Payment/Confirmation Policies and Deadlines
The Financial Affairs website has specific and detailed requirements regarding payment and confirmation of class schedules.
A graduate student may withdraw from the University (i.e., withdraw from all courses in the semester), either for non-medical or medical reasons, as long as this is done prior to the last day of classes. The first thing a student considering withdrawal should do is to consult with his or her academic advisor.

It is the student’s responsibility to initiate a withdrawal and provide the information necessary to complete the withdrawal process. Withdrawal cannot be initiated through myBama, and academic bankruptcy (described in the Undergraduate Catalog) is not available to graduate students.

Withdrawal from the University requires approval for withdrawal from the Office of Academic Records and University Registrar (206 Student Services Center), as well as approval of the dean of the division in which the student is enrolled.

After the first week of a semester, the fact and date of a withdrawal from the University will be noted on the student’s permanent record. After the tenth week, the student’s academic status at the time of withdrawal will be noted on the record with a “W” for courses passing and an “F” for courses failing.

For a medical withdrawal, the student must contact University Health Service. A medical withdrawal cannot be granted if the graduate student has taken any finals or their equivalent (final papers, final projects, or similar assignments) for the semester for which a withdrawal is being requested. The procedures for a medical withdrawal are available by contacting University Health Service (348-6262).

The University’s withdrawal policies can be found on the Student Receivables site.

For the different types of withdrawal, the process to initiate each one, and its impact on academic records, please go to the University main web pages regarding withdrawal.

For complete details about the financial implications of withdrawals on tuition and other expenses please refer to the University’s policies at the Student Receivables' website.

Information about the impact of withdrawal on students receiving federal financial aid can be found at Student Receivables' website.

Impact of Withdrawal on Institutional and Non-Institutional (Non-Federal only) Loans and Scholarships if no Federal Aid is Involved detailed information is on the Student Receivables website.
3.11 HOUSING AND DINING OPTIONS

General Information

Housing
Housing is available in the many neighborhoods surrounding the University where apartments, rental houses, and condominiums are plentiful and reasonably priced. For more information concerning off-campus housing please contact Julie Elmore, Assistant Director for off-campus housing at 205-348-9647 or jelmore@sa.ua.edu. You may also visit www.TuscaloosaApartmentGuide.com or www.crimsonchoice.ua.edu.

Dining Options
There are many food-service areas on campus, including the Ferguson Center food court, and a growing number of options in multiple locations. Students who live off campus, as well as campus residents, can enjoy the convenience of Bama Dining food service.

The UA Action Card or ACT Card is a debit (Bama Cash) account that may be used at any Bama Dining location. Students may deposit money in a debit (Bama Cash) account at any time during the semester. Money-saving meal plans are also available through Bama Dining. Additional information may be obtained by visiting Bama Dining’s Website or by writing to Bama Dining, Box 870389, Tuscaloosa, AL 35487-0389. Bama Dinig can be reached at (205) 348-6816 or 1-888-226-2366.
3.12 VETERANS SERVICES

The Office of Veterans Services provides assistance to veterans, reservists, service persons, and eligible dependents. The office processes all certifications that must be filed with the Department of Veterans Affairs before educational benefits can be received. Students must register with the Office of Veterans Services each semester to begin receiving or to continue receiving benefits. In addition to helping students apply for benefits and complete VA certifications, the Office of Veterans Services provides academic, personal, and financial referrals to students in VA programs. VA-sponsored work-study programs and tutoring are available to those who qualify. Students eligible for veterans benefits include VEAP veterans, reservists and veterans on the "New GI Bill," disabled veterans, dependents of persons who have total and permanent service-connected disabilities, and dependents of persons whose deaths were service-connected.

Information about services, application procedures, and compliance with VA requirements is available at the Office of Veterans Services, 106 Student Services Center, or by contacting The University of Alabama, Office of Veterans Services, Box 870162, Tuscaloosa, AL 35487-0162; (205) 348-6770, fax (205) 348-2989.
3.13 UNIVERSITY HEALTH SERVICE

The purpose of the University Health Service is to provide high-quality, low-cost, ambulatory health care and related services to the students of The University of Alabama; to educate the University community concerning health issues and prevention strategies; to develop collaborative relationships with related academic areas; and to provide both teaching and learning opportunities to our students and faculty. Students taking more than 4 hours of coursework pay a mandatory student health fee as part of their tuition and are thus eligible for care. Students taking 4 hours or less may waive the health fee, and if they waive the health fee, they are not eligible for care. Health services are not available during the holiday periods when the University is not officially in session. As a registration requirement, all new students born in or after 1957 must provide proof of immunization with two measles-containing vaccines after their first birthday; one of these vaccinations must have been an MMR and must have been given after 1980. All new students must be appropriately screened for tuberculosis within the last year as a registration requirement.

The Student Health Center (SHC) is a modern facility designed especially for the University Health Service’s purposes. The service is accredited by the Accreditation Association for Ambulatory Health Care (AAAHC) and is the only accredited student health service in the state of Alabama to earn this distinction.

Outpatient Services
Full clinical services are available from 8:00 a.m. to 8:00 p.m. Monday through Thursday, from 9:00 a.m. to 5:00 p.m. Friday, and from 1:00 p.m. to 4:00 p.m. on Saturdays (except game days) and Sundays. (During Interim term and the summer session, the health center closes at 5:00 p.m. weekdays and is not open on the weekend.) Students are strongly encouraged to schedule appointments with the health care provider by calling (205) 348-APPT. Care consists of general medicine, women's health, counseling and psychological services, and minor surgery. Referrals to appropriate specialists are available. The cost of the specialized care is the responsibility of the student.

Any student requiring services not available at the health center will be transferred or referred elsewhere at the student's expense, under the care of a physician of the student's choice. Ambulance service is not furnished.

Charges
The student health fee provides access to all Student Health Center (SHC) services and covers the cost of SHC's nursing, assessment, triage, health education, health promotion, and counseling services. As is true in other health care settings, there is a charge for office visits with SHC's health care providers, X-rays, and laboratory tests. SHC accepts all health insurance plans and will bill your insurance carrier for these services. SHC provides health care for all students whether or not they have health insurance and without regard for their ability to pay for services.

SHC charges for any co-payments required under students' health insurance plans, and there are fees for certain products and services such as orthopedic appliances issued and prescriptions filled at our pharmacy. The student is responsible for fees for any services of non-staff physicians or consultants and for the costs of hospitalization or services other than those provided at the Student Health Center.

The Student Health Center is located at 750 5th Avenue East. For more information, contact The University of Alabama, SHC, Box 870360, Tuscaloosa, AL 35487-0360; telephone (205) 348-2778.
The Center for Academic Success (CAS) is an integral part of the University's plan for academic excellence. The mission of CAS is to enhance learning through the design and delivery of academic support services. CAS provides services designed to help all students apply effective learning strategies to their academic coursework as well as services to assist students who need to strengthen their academic skills in particular areas.

Academic support programs are offered through individual and group tutoring and consultation, a multimedia resource center, curricular courses, structured review programs, supplemental instruction, and informal help sessions. Student Support Services, a TRIO program, which is funded through the U.S. Department of Education is also a part of CAS and provides academic assistance and counseling to approximately 200 first-generation, income and disability-eligible students. CAS services are designed to help students upgrade study strategies and reading proficiencies, succeed in specific University courses—especially quantitative ones—and compete successfully for admission to graduate and professional schools.

For further information, contact the Center for Teaching and Learning, 101 Osband Hall, Box 870304, Tuscaloosa, AL 35487-0304; telephone (205) 348-5175.
The **Office of Disability Services (ODS)** is the central contact point for University students with disabilities. The goal of ODS is to ensure that University programs and services are accessible to qualified students with disabilities. ODS works with faculty and other members of the University community to provide individualized academic accommodations and support services while promoting student responsibility and self-advocacy. It is the student's responsibility to make known a need for academic accommodations and services by providing appropriate documentation of the disability to ODS, formally requesting accommodations through meeting with an ODS case manager, and by presenting an official ODS accommodation letter to each of his/her professors. For more information about services for students with disabilities, consult the [Office of Disability Services website](http://graduate.ua.edu/catalog/13300.html) or call (205) 348-4285 (voice) or (205) 348-3081 (TTY). Written correspondence should be addressed to The Office of Disability Services, Box 870185, Tuscaloosa, AL 35487-0185. ODS is located at 133-B Martha Parham Hall East.
3.16 GRADUATE STUDENT SERVICES

The Mission of Graduate Student Services (GSS) is to increase and support the academic, personal, and professional growth of graduate and professional students at The University of Alabama. This mission holds at its core the commitment to sharing in the socialization process of graduates and professionals to the culture of their UA graduate family and their chosen profession. GSS provides an avenue to lifelong learning, acquiring essential resources and services, as well as promoting a supportive framework of unique services through collaborating with student organizations, academic departments, and other student affairs units. GSS is dedicated to student development and giving graduate and professional students at UA an audible and collective voice. GSS coordinates Orientation for New Graduate Students at the beginning of fall semester and supports scheduled workshops and seminars during the school year that are designed to assist students in succeeding and excelling in graduate school. Development of research skills is the focus of an annual graduate student research conference sponsored by Graduate Student Services, the Graduate Student Association (GSA), and the Graduate School. Additionally, GSS hosts a variety of cultural and educational events throughout the year, coordinates Graduate Appreciation Week in April, and advises the GSA and Alpha Epsilon Lambda Graduate Honor Society.

The office of Graduate Student Services is located in the Office of the Dean of Students, 230 Ferguson Center, and can be reached by telephone at (205) 348-6796 or by fax at (205) 348-8326.
More than ever before, students are choosing distance education to pursue their college degrees. The Division of Academic Outreach strives to facilitate distance degree programs to adult learners who are limited by time, geography, work schedules, or personal obligations. Students may choose from formats that will fit their schedules and learning styles such as online, interactive video conferencing, evening and weekend classes, or online video-streamed classes.

For more information on these programs, write to The University of Alabama, College of Continuing Studies, Division of Academic Outreach, Box 870388, Tuscaloosa, AL 35487-0388. You may also call 205-348-0089 or toll free 800-467-0227, or e-mail aoinfo@ccs.ua.edu. Visit the Bama by Distance website.

Online Courses
Academic Outreach delivers courses over the Internet directly to the student’s computer. Students are instructed through a secured Internet site, and they interact with their professors and complete lessons. Online courses accommodate the educational needs of individuals who have access to and experience with a computer and the Internet.

Video Courses
Academic Outreach delivers undergraduate and graduate courses via online video streaming to students who cannot attend classes on campus. Lectures are recorded as they occur and streamed via the Internet the same day. Students who do not have high speed internet access are given the option to receive DVD recordings of the lectures. Students complete the same course requirements as on-campus students and take proctored exams at convenient sites.

IITS (Videoconferencing)
The Intercampus Interactive Telecommunication System (IITS) is a network of conference rooms connected to a statewide videoconferencing network. Approximately 30 sites throughout Alabama are equipped with cameras, monitors, and other devices that allow teachers and students to interact as if they were in the same room. Presenters use traditional visuals, such as PowerPoint presentations, overheads, and videotape/DVD as well as digital options unique to IITS.

Weekend College
Designed to meet the needs of both part-time and full-time students, Weekend College offers a number of courses in the fall, spring, and summer on Friday evenings and Saturday mornings and afternoons. Scheduling weekend classes is especially convenient for part-time students who would like to pursue academic studies while working.

Gadsden Education and Research Center
Established in 1946, The University of Alabama’s Gadsden Education and Research Center is an off-campus program serving residents of northeast Alabama. The center offers graduate coursework for credit, noncredit programs for professional development, and test services as well as serves as a liaison to the University’s main campus. Currently, the center offers more than 25 complete graduate degree or certification programs in education, including master’s degrees, educational specialist’s degrees, and class A and class AA certification programs. Graduate-level courses in library studies are also available in Gadsden. For more information please call 256-546-2886 or toll free 888-223-4131, or visit our Gadsden Center web site.

Evening Program
The Evening Program offers classes at times convenient for working adults. Students unable to continue their education in the traditional format (day classes) may take courses offered after 5:00 pm Monday through Friday. Courses are offered at both the undergraduate and graduate level in various subject areas.
Adult Student Services
The Division of Academic Outreach provides a University-wide point of entry for adult students returning to campus or entering the University for the first time. The division provides the services listed below to meet the particular needs of adult students. Through Academic Outreach students can:

- initiate the admission process
- receive assistance with applying for financial aid and adult student scholarships
- be referred to appropriate offices at the University for additional assistance with individual needs
- receive assistance with academic advising and schedule building

For more information call Academic Outreach Student Services toll free at 800-467-0227 or 205-348-0089, or visit the Bama by Distance website.
3.18 WORKSHOP FOR NEW GRADUATE TEACHING ASSISTANTS

Each August, the Graduate School hosts a workshop for all new graduate teaching assistants (GTAs). The program is mandatory for all new GTAs, both U.S. and international.

At the Workshop for New GTAs, faculty and staff recognized for their superior teaching provide formal presentations on topics such as syllabus and course preparation, teaching with technology, leading group discussions, leading lab sessions, and important policies and legal issues for GTAs and professors alike.

Experienced GTAs recognized for superior teaching in their respective colleges lead the second day of sessions at the workshop. These "Graduate Teaching Fellows" videotape new GTAs who have each prepared a short presentation. Each GTA receives both written and oral analyses of teaching strengths and areas for improvement. The new GTAs then have the opportunity to analyze videos that show some of the most frequently occurring problems in the classroom. The Fellows engage the new GTAs in discussing important University policies such as services for students with disabilities, harassment, academic misconduct, academic grievances, and the confidentiality of student records.

All GTAs who are non-native speakers of English must also successfully complete the International Teaching Assistant Program (ITAP), conducted by the University's English Language Institute, before they will be allowed to teach.
3.19 CAPSTONE INTERNATIONAL CENTER

The University of Alabama provides a wide variety of international education programs and services at the Capstone International Center (CIC), housed on the first floor of B. B. Comer Hall. Known simply as Capstone International, the Capstone International Center takes its name from its historical pre-eminence in the state as a provider of international education. CIC is comprised of several integrated units. These include the English Language Institute (ELI), Capstone International Academic Programs (CIAP), and Capstone International Services (CIS). The Capstone International Center has multiple complementary functions, ranging from intensive English language instruction to U.S. immigration compliance, Fulbright programs, and overseas study. Capstone International is a multipurpose center designed to inform, assist, and educate both international and domestic students, faculty, and staff members, as well as members of the local civic, education, and corporate communities. Capstone International annually serves almost 1500 international students on-campus and makes possible the participation of UA faculty, students, and staff in a multitude of internationally focused degree, research, and outreach programs. Capstone International Academic Programs sends approximately 1100 students abroad each year.

Outreach is an important function within Capstone International as evidenced by its Capstone International newsletter, support of the Sakura Festival (focused on Japanese culture), and the work of the English Language Institute (ELI). ELI provides the annual World Friends Day for local elementary schools, annual summer programs for students from our sister city in Japan, on-site corporate programs and tailored courses for the children and spouses of employees. A wide variety of activities are coordinated in conjunction with the Rotary International Club of Tuscaloosa, Tuscaloosa's International Friends (TIF), the Children's Hands-on Museum (CHOM), University Place Montessori School, and the Tuscaloosa Club of Altrusa International. In addition, CIC has previously worked extensively with the German Supplementary School for school-age children from Germany and is currently working on the development of a German Culture Center.

The University is a member of numerous international education organizations providing professional training, outreach to national and local governmental entities, and annual conferences to promote international education at member universities. These organizations include: NAFSA: Association for International Educators, the Institute for International Education (IIE), the Council on International Educational Exchange (CIEE), the Association of International Education Administrators (AIEA), the European Association of International Education (EAIE), and the Forum on Education Aboard.

Programming, activities, and resources of CIC include:

- Academic Programs
- Academic Support Program
- English Language Institute
- External Group Programs
- Fulbright Programs
- Graduate Research Scholarships
- Intensive English Program
- International Exchange Programs
- International Linkages
- International Scholar Events
- International Student and Scholar Services
- International Student Programming
- International Teaching Assistant Program (ITAP)
- Multicultural Guidance and Counseling
- Overseas Study
- Overseas Study Resource Center

http://graduate.ua.edu/catalog/13700.html
Contact the CIC

The Capstone International Center can be contacted by telephone (205) 348-5256, by fax at (205) 348-5298, by email at cic@ua.edu or by mail at The University of Alabama, Capstone International Center, Box 870254, Tuscaloosa, AL 35487-0254. The office is located in 135 B.B. Comer Hall.

ACADEMIC PROGRAMS

The primary focus of International Academic Programs, a unit of the Capstone International Center, is providing study abroad and other academically focused study opportunities for students.

Fulbright Programs

CIC and Academic Programs encourage and facilitate active participation in all Fulbright programs. Since the founding of the Fulbright programs in 1948, more than 100 UA students, faculty, and professional staff members have been selected to receive the prestigious Fulbright award. Their appointments have ranged from Austria to Zimbabwe.

International Exchange Programs

The University of Alabama offers a number of international exchange programs that allow students to study as visiting students at overseas universities. Each program gives students opportunities to learn in a foreign country where they obtain firsthand knowledge of another people, language, and culture in addition to gaining course credits. In some cases, a working knowledge of the language of the host country is a prerequisite. In others, the language can be studied for the first time in the host country; sometimes, no language requirement is necessary (e.g., England and Australia). Students pay University of Alabama tuition based on residency and are assisted in arranging transfer of credits through appropriate departments and divisions prior to departure. Graduate students should secure approval from the Graduate School prior to taking any overseas credit that they may wish to transfer.

International exchange programs are available to UA students at the following partner universities for either one or two semesters and, in some cases, summer study:

- Australia: Queensland University of Technology (Brisbane)
- Austria: Universität of Klagenfurt (Klagenfurt)
- Belgium: Hautes Etudes Commerciales (Liège)
- Denmark: Aarhus School of Business (Aarhus)
- England: University of Hull (Hull); University of Birmingham Shakespeare Institute (Birmingham); University of Leicester (Leicester)
- France: Université François Rabelais (Tours), Bordeaux Ecole de Management/Bordeaux Business School (Bordeaux), Universite de Poitiers (Poitiers), Paris-Est Marna-la-Valle (Paris)
- Germany: Universität of Mannheim (Mannheim); Freie Universitat Berlin (Berlin), Augsburg University (Augsburg)
- Italy: Universita Cattolica Del Socro Coure (Milan); Polytechnic University of Torin (Torin)
- Japan: Chiba University (Chiba); Hiroshima University (Hiroshima); Kansai Gaidai University (Osaka); Ritsumeikan University (Kyoto), Meiji University (Tokyo)
- Korea: Pusan National University (Pusan); Yonsei University (Seoul), Ajou University (Suwon); Yeungnam University (Gyeongsan)
- Scotland: University of Glasgow (Glasgow)
Taiwan: Feng Chia University (Taichung)
Wales: Aberystwyth University (Aberystwyth)

Short-term Group Overseas Study

In addition to its longer-term international exchange programs, The University of Alabama conducts many overseas study programs lasting from two to six weeks, most often during the summer and interim sessions. Scholarships and financial aid are available to students participating in these programs. Programs and fields of study in recent years have included the following:

- Alabama at Oxford: English, History, and Honors
- Alabama in Austria: German language and culture
- Alabama in Belgium: Political Science
- Alabama in China: Chinese, business, communications, culture
- Alabama in Ecuador: Biology
- Alabama in France: French language, culture and literature
- Alabama in Ghana: Geography and healthcare
- Alabama in Greece: Classical civilization, religious studies
- Alabama in Italy: Italian language and culture, art history, New College
- Alabama in Japan: Japanese language and culture, transcultural nursing
- Alabama in Spain: Spanish language and culture
- Alabama in Spain: Engineering
- Alabama in Sweden: Political science
- Alabama in Turkey: Business
- Alabama in Barcelona: Internships
- Alabama in Dublin: Internships
- Alabama in London: Internships

Academic Program Policies

- Students participating in UA programs abroad must be in academic good standing. GPA requirements vary by program.
- All UA students participating on programs abroad will be cleared through the Office of Judicial Affairs.
- Students must submit all application and pre-departure requirements prior to program departure.
- Capstone International Programs does not offer programs in countries where current U.S. Department of State Travel Warnings exist.

Capstone International provides insurance through Cultural Insurance Services International (CISI). Students traveling abroad on a University of Alabama exchange or faculty-led program are required to carry CISI insurance. Capstone International will assist students with obtaining the appropriate policy for their time abroad.

Additional information about any international program may be obtained from studyabroad.ua.edu; 135 B.B. Comer Hall; by writing The University of Alabama, Capstone International, Box 870254, Tuscaloosa, AL 35487-0254; or by calling (205) 348-5256. If The University of Alabama is unable to meet the overseas study needs of a student, Capstone International provides information about additional international education opportunities available through study abroad at other institutions and organizations.

Japan Program

The Capstone International Center, in conjunction with the Department of Modern Languages, administers academic and cultural programs and activities designed to increase understanding
between the peoples of the United States and Japan. Through linkages with universities and other educational or cultural agencies in Japan, the program enables UA students and faculty members to study, conduct research, and teach in Japan.

Reciprocal student exchange programs with Kansai Gaidai University in Osaka, Ritsumeikan University in Kyoto, Hiroshima University, Meiji University in Tokyo and Chiba University enable qualified postgraduate students to study Japanese in Japan while undertaking Asian studies, humanities, social science, and science courses taught in English. Generous AIE-J scholarships providing round-trip transportation and a monthly stipend are available on a competitive basis to UA students. Examples of courses offered at partner institutions include Japanese-Style Management, Japanese Economic Development, Sociology of Everyday Life in Japan, Survey of Modern Japanese History, Japanese Culture and Education, Seminar in Geography, Agriculture and Agricultural Sciences in Japan, and Introduction to Deep-Sea Biology.

Chiba University offers prestigious Monbusho (Ministry of Education) graduate student research scholarships for 18 months of study. The Monbusho scholarship provides round-trip transportation and monthly stipends to cover living costs.

A founding and active member of the Tuscaloosa Sister-Cities Commission as well as the Japan-America Society of Alabama, Capstone International organizes the annual spring Sakura Festival and Haiku contest for the state of Alabama.

Contact Academic Programs
Capstone Academic Programs can be contacted by telephone (205) 348-5256, by fax at (205) 348-5298, by email at studyabroad@ua.edu or by mail at The University of Alabama, Capstone International Center, Box 870254, Tuscaloosa, AL 35487-0254. The office is located in 135 B.B. Comer Hall.

INTERNATIONAL SERVICES

International Services, a unit of the Capstone International Center, provides specialized services for international students, professors, research scholars, visitors, and their families.

International Services’ primary function is to provide visa support for these international members of the UA community. The office is responsible for the creation and ongoing maintenance and verification of visa support documents within the Student and Exchange Visitor Information System (SEVIS) for both F-1 student visas and J-1 student and scholar visas. These are ongoing services that monitor individual progress according to federal regulations. The office is also responsible for filing H-1B and other types of work-visa support documentation on behalf of international faculty and staff at UA.

International Services conducts comprehensive orientation programs and provides vital information regarding U.S. immigration compliance as well as multicultural guidance and counseling. Great emphasis is placed on international student programming. International Services coordinates a wide variety of student activities such as a weekly international coffee hour, an international spouse support group, and an annual "Welcome" reception for international students at the President’s Mansion.

Professional staff members advise and assist the International Student Association, which represents all international students, and the many nationality organizations on campus. Professional staff work closely with community groups such as Tuscaloosa's International Friends (TIF), which sponsors a friendship family program for international students.

International Services may be contacted by telephone at (205) 348-5402, by fax at (205) 348-5406, by email at international@ua.edu, and by mail at Box 870254, Tuscaloosa, AL 35487-0254, USA. More information about office services, visa regulations, and processing of visa support is available on our website: http://is.ua.edu. International Services is located in 105 B. B. Comer Hall.

ENGLISH LANGUAGE INSTITUTE
The University of Alabama English Language Institute (ELI), a unit of the Capstone International Center, provides instruction and support in English as a second language for non-native speakers of English.

The ELI offers the following programs:

**Intensive English Program and Courses**

The ELI Intensive English Program (IEP), which is accredited by the Commission on English Language Program Accreditation (CEA), is designed for individuals who need to learn English as a second language. The focus of the program is on preparing students for academic success in undergraduate and graduate study at The University of Alabama.

Six levels of study, from beginning to advanced, are available. Each level consists of 22 hours of core classes per week. Each level of study lasts six to eight weeks and is available six times per year. Sessions begin in January, March, May, June, August and October. Students may begin their English study at the start of any one of these sessions.

Students pursuing graduate study must complete Levels 4, 5, and 6 with a GPA of 3.5 or obtain a minimum iBT score of 79 or a 6.5 IELTS score. In certain cases, the Graduate School, the ELI, and the student's academic department may together grant permission for a student to enroll in one graduate course per semester while completing the ELI program of study. The specific course must be approved by the instructor and department prior to enrollment. Students who receive Provisional Language Admission to the Graduate School because they do not have the required minimum TOEFL or IELTS score may also receive permission to take one graduate course depending upon their placement level within the ELI.

ELI Intensive English Program courses are designed for those who require a concentrated curriculum of study in English:

**Structure**: Levels 1–6. ELI structure courses provide students with the basic grammatical structures they will need to communicate effectively in English in the four language skill areas: listening, speaking, reading, and writing. Each structure course emphasizes communication—both comprehension (listening and reading) and production (speaking and writing). Structure courses meet five hours per week.

**Speaking/Listening**: Levels 1–6. ELI courses in speaking/listening provide students with the opportunity to improve their listening and speaking skills and to gain confidence in using English to communicate orally. Students practice appropriate conversation management skills, receive instruction on problem areas of pronunciation, and learn useful vocabulary. These activities are carried on through a variety of classroom exercises that focus on the everyday situations students are likely to encounter while adjusting to life in the United States. Speaking/listening courses meet six hours per week.

**Reading/Writing**: Levels 1–6. The ELI reading/writing curriculum is designed to provide students with skills needed to comprehend written discourse at the college level as well as produce written English in a variety of forms. Reading skills include understanding the main idea of a passage, understanding an author's purpose, distinguishing fact from opinion, reading quickly, using the resources of a collegiate dictionary, and discussing written discourse in a relatively sophisticated manner. Writing exercises are designed to stimulate self-expression and personal involvement in writing. With attention to each step of the writing process—thinking, writing, and rewriting—teachers guide students toward communicating their ideas with increasing clarity and depth. Reading/Writing courses meet nine hours per week.

**Culturally Speaking**

Through the Culturally Speaking class, ELI students can meet regularly with American students to converse in English in relaxed surroundings. The Culturally Speaking class provides a comfortable way for ELI students to form friendships with American students and to practice their English by discussing cross-cultural issues.
Culture & Language Exchange Program
The Culture & Language Exchange Program pairs an ELI student with an American student who is studying or has expressed an interest in the ELI student's native language/culture. Once paired, these students then meet as often as they like for conversation practice in both English and in the particular foreign language. Culture & Language Exchange partners are not guaranteed and can only be provided when available.

ELI Customized Group Programs
Customized group programs can be designed upon request for groups with mutual goals and concerns who desire highly specialized, intensive curricula. Such programs are typically designed for international English teachers, students whose international universities have approved particular curricula for credit, international graduate students preparing to enter universities throughout the US, and business professionals who wish to improve their overall effectiveness in English or to concentrate on specific skills such as written communication.

An organization interested in a customized group program should contact the English Language Institute to request a program proposal.

Academic Support Program
The ELI Academic Support Program provides opportunities for UA undergraduate and graduate students who may want or need additional English-language instruction. At the graduate level, ESL support courses in written and spoken English are available free of charge to full-time international graduate students each fall and spring semester. In addition, the ELI Study Center and the UA Language Resource Center are available for individualized language assistance.

International Teaching Assistant Program
The International Teaching Assistant Program (ITAP) provides training and evaluation for international students with graduate teaching assistantships. Participation in the ITAP program is mandatory for all non-native English-speaking GTAs and graduate assistants who have instructional responsibilities at the University.

Contact the ELI
To obtain more information about any of the above ELI programs, contact The University of Alabama English Language Institute, visit the ELI website (www.eli.ua.edu) or contact the ELI at Box 870250, Tuscaloosa, AL 35487-0250; telephone (205) 348-7413; fax (205) 348-9266; or e-mail info@eli.ua.edu.
3.20 ACADEMIC COMMON MARKET (ACM)

The Academic Common Market is a program designed to avoid needless duplication of academic programs between and among states in the Southern Regional Education Board region. At each university that participates in the ACM, that university will pay the out-of-state portion of tuition for qualified students from selected states and majoring in programs pre-approved for the ACM. A complete list of UA ACM programs by state and an online application form for UA students are available at UA's Academic Common Market website. The majority of ACM programs are undergraduate programs.

University of Alabama Qualifications for the ACM

For first-time ACM certification, a freshman or undergraduate transfer student must have at least a 25 ACT composite score or 1130 SAT composite score (math and verbal only) and at least a 3.00 overall high school GPA. UA does not superscore (i.e., combine the best math and verbal from multiple test administrations) when considering admissions tests, and taking the optional writing section of the ACT does not have a positive or negative effect on the composite score. First-time or transfer graduate students must meet all admission requirements of the Graduate School and hold a valid admission letter from the Graduate School.

For continuing certification after a student’s first semester receiving ACM support, each undergraduate and graduate UA ACM student must maintain at least a 3.0 overall GPA on all UA course work attempted. This GPA standard is in addition to the long-standing requirements for maintaining residency and staying in the ACM major for which the student has been certified by the home state and approved by UA.

NOTE. The SREB (Southern Regional Education Board) oversees the ACM. Its website has the contact information for each state’s ACM coordinator and a list of UA’s currently approved ACM programs.

If you have any questions please contact jchamber@bama.ua.edu
3.21 MILITARY PROGRAMS

General
Army or Air Force ROTC scholarships and other financial assistance may be available to qualified students who plan to be enrolled for at least two years. Interested students may obtain information about current programs from one of the following ROTC offices: The University of Alabama, Professor of Military Science, Box 870260, Tuscaloosa, AL 35487-0260; or Air Force ROTC Detachment 10, The University of Alabama, Box 870258, Tuscaloosa, AL 35487-0258.

Air Force ROTC
An Air Force officer's commission is available to graduate students through the Air Force ROTC Two-Year Program. If other qualifications are met, a student with at least two full years of full-time coursework remaining (in either graduate studies or a combination of undergraduate and graduate courses) can apply for entry into the Professional Officer Course (POC).

Applicants must favorably complete the Air Force Officer Qualifying Test, pass a medical physical, pass a physical fitness test, and have at least a 2.0 GPA. Students selected to enter the cadet corps will be scheduled for a summer field training encampment prior to entry into the POC. Field training camps are conducted at Air Force bases throughout the United States. Successful completion of field training qualifies the student to enter the POC. The student then completes the last two academic years of graduate and/or undergraduate studies, taking one 3-hour Air Force studies (AFS) class and a leadership laboratory each semester in order to gain an officer's commission upon completion of studies. Cadets in the POC are paid a $350–400 stipend per month during the academic year and may be eligible for academic scholarships. To apply, contact The University of Alabama, AFROTC DET010, Box 870258, Tuscaloosa, AL 35487-0258, or call (205) 348-5900 prior to planned entry into Air Force ROTC.

Required Air Force ROTC courses for the Two-Year Program are AFS 350 and AFS 301, AFS 360 and AFS 302, AFS 470 and AFS 401, and AFS 480 and AFS 402. Course descriptions may be found in The University of Alabama undergraduate catalog.

Army ROTC
Army officer's commissions are available to graduate students through the Army ROTC two-year option. A student with at least two years of full-time coursework remaining (in either graduate studies or a combination of undergraduate and graduate courses) can apply for the Advanced ROTC Program. Students will be required to take three ROTC classes each semester while completing their graduate or undergraduate studies. Advanced ROTC Program students must attend the Leader's Development Assessment course between the first and second years of enrollment, for which they will be paid one-half the pay of a second lieutenant ($887.00). Students are paid a monthly tax-free subsistence allowance ($450.00 per month during the first year and $500.00 per month the second year) while enrolled in the Advanced ROTC Program. Full-tuition scholarships are available to qualified students who commission before age 27. To apply, contact The University of Alabama, ROTC Department, Box 870260, Tuscaloosa, AL 35487-0260; or call (205) 348-1056.

Course descriptions may be found in The University of Alabama Undergraduate Catalog.

Readmission of Service Members
The University complies with laws concerning readmission of service members.

A student who has been admitted to or enrolled in The University of Alabama Graduate School may ask for a military leave to fulfill a U.S. military obligation. The student should notify the Dean of the Graduate School of a call to military service and provide documentation. Upon return from military service, the student also should notify the Dean of the Graduate School.
of the intent to return to graduate school and provide documentation of honorable discharge.

A student called to active military duty, unless dishonorably discharged, and eligible for readmission as defined by law, will receive an extension of the degree time limit equal to the term of eligible service, with a cap on the number of years in the extension. The extension is subject to the 5-year limit as applicable to readmission provisions in the Higher Education Opportunity Act of 2008 (Section 484C of the HEA) and implementing regulations in 34 CFR Section 668.18.
UNIVERSITY-WIDE ACADEMIC GRIEVANCE PROCEDURES

I. Academic Grievances

A. A student academic grievance is broadly defined as a student complaint regarding an academic action taken by instructional or administrative personnel at The University of Alabama. An academic grievance may be filed by a student against university personnel including instructional personnel, administrators, or staff members at the University. Examples of academic grievances include, but are not limited to, allegations of unfairness in grading, alleged violation of a written or oral agreement with a student (e.g. course requirements for graduation), and alleged inconsistent applications of existing policies.

For a protest of a final course grade or other final comprehensive evaluations to be considered, the protest must be based upon one or more of the following grounds and upon allegation that the ground or grounds cited influenced the grade assignment to the student's detriment:

1. Arithmetic or clerical error
2. Arbitrariness, possibly including discrimination based upon race, sex, religion, or national origin of the student
3. Personal malice

Grievances related to course grades normally should be filed during the semester in which the alleged action takes place, but such protest must be made not later than the last day of classes of the next succeeding regular semester. This grievance procedure is not available in cases where a decision has been appealed, and been afforded a committee hearing, and the appeal has been denied.

B. A student must file a grievance in the academic department (academic department is a phrase that also refers to academic program or area if these terms apply) of The University of Alabama in which the alleged action took place. Academic grievances shall be resolved by the department head in the division where the grievance took place. Grievances concerning matters that are not within the jurisdiction of a particular academic division and grievances against the divisional academic dean must be resolved by the Provost/Vice President for Academic Affairs. Grievances against the department chairperson must be resolved by the divisional academic dean. Appeals from the academic dean's decisions may also be made to the Provost/Vice President for Academic Affairs.

II. Resolution by Department Chairperson

A. A student who believes that an academic action has unjustly affected him/her may file a grievance with the department chairperson. The facts and circumstances which are bases for the academic grievance should be presented to the department chairperson in written form.

B. The department chairperson will schedule a conference with the student who has brought the grievance, reissue the student a copy of the University-wide Academic Grievance Procedures, ascertain the circumstances involved, and review any materials or circumstances pertinent to the grievance to determine if there seems to be a reasonable or sound basis for the academic grievance. If the chairperson decides there may be a reasonable or sound basis for the academic grievance, or if the student insists on filing the grievance anyway, then the department chairperson will arrange conferences with the student and other person(s) involved.

Prior to these conferences, the other person(s) involved will be given a copy of the written grievance and will be reissued a copy of the University-wide Academic Grievance Procedures.
Both the student and other person(s) will be informed that the purpose of conferences scheduled by the department chairperson is to attempt to resolve the issue informally. Both parties will be informed that they have the right to present any evidence, supporting witnesses, or any other relevant information during these conferences.

C. At the beginning of these conferences, the department chairperson will inform the student and other person(s) involved that the purpose of these meetings is to attempt to resolve the grievances informally. The department chairperson will act as intermediary between the student and other individual(s) with whom the student has a dispute. If a mutually satisfactory resolution can be reached, the academic grievance is resolved.

D. If a resolution cannot be reached informally between the student and other person(s) involved, then the matter will be forwarded to the academic dean to be resolved.

III. Resolution by Academic Dean

Any matter not resolved by the department chairperson will be resolved by the academic dean. The dean may act alone or in the conjunction with a standing divisional committee or an ad hoc committee appointed by the dean, but the dean will make the decision. The academic dean will arrange conferences with the faculty or staff member, student, and others, as may be appropriate, to discuss the matter in question. The student and other person(s) involved will be given an opportunity to make a statement, present evidence, witnesses, or materials pertinent to the academic grievance; during these conferences both parties can be accompanied or advised by anyone either party chooses. The academic dean, after careful deliberation, will render a decision.

Notice of the dean's decision will be sent by certified mail to the student with copies to the faculty or staff member and other involved parties; either party may appeal the dean's decision to the Office for Academic Affairs if the appeal is filed within 15 working days of the date of mailing of the dean's decision.

IV. Appeal

The dean's decision may be appealed to the Office for Academic Affairs within 15 working days of the mailing of the dean's decision. Appeals must be based on substantive grounds such as procedural errors, new information, or inconsistencies in the application of policies.

When an appeal is received by the Office for Academic Affairs, an official from that office will schedule a conference(s) with the student and other concerned parties to discuss the reasons for the appeal. If meetings with the student and other concerned parties result in an agreeable solution to the matter, the appeal process will end. If no such solution is reached, the official from the Office for Academic Affairs will recommend to the Provost/Vice President for Academic Affairs, giving reasons for the recommendation, whether the appeal should be heard or denied. If the Provost/Vice President for Academic Affairs denies the appeal, the appeal process will end. If the appeal is to be heard, the official from the Office for Academic Affairs will convene a panel to resolve the issues that remain. The panel will consist of a person designated by the Vice President for Student Affairs, a person designated by the Provost/Vice President for Academic Affairs (not the official convening the panel), one student (appointed by the President of the SGA), and one faculty member (appointed by the President of the Faculty Senate); both the student and the faculty member will come from the division holding jurisdiction for resolving the academic grievance if it is possible to find such people who have no prior connection with the case. In cases involving graduate students, the faculty and student members of the appeal panel should hold graduate faculty or graduate student status respectively. The person designated by the Provost/Vice President for Academic Affairs will serve as hearing administrator and will coordinate and preside at all meetings conducted to resolve the academic grievance appeal.

The hearing by a panel is an administrative hearing and the proceedings will be informal rather than those used in courts of law. The panel may admit any evidence which is of
probative value in determining the issues, subject to the panel's judgment as to the relevance, credibility, and weight of the evidence. The panel may ask the parties to produce evidence on specific issues, may examine witnesses, and may call and examine its own witnesses. The student may be represented at the hearing by a person of his or her choice; if the student is represented by an attorney, then the other parties may be represented by a person from the Office of the University Counsel. Each party (or the representative of the party) will have the right to confront and cross-examine all opposing witnesses. The panel will decide each of the issues raised in the appeal. The panel's decision will be final and will conclude the process insofar as the University is concerned.

A decision contrary to the student's position must be supported by the votes of at least three of the four panel members. The panel will give written notice of its decision to the student, the faculty or staff member, the dean, and the Provost/Vice President for Academic Affairs.
4.1 DEGREES CONFERRED
The following degrees are conferred by the Graduate School:

**Master of Accountancy**

**Master of Arts** in the fields of:

**Master of Business Administration**

**Master of Fine Arts** in the fields of:
Art, Book Arts, Creative Writing, and Theatre.

**Master of Library and Information Studies**

**Master of Music**

**Master of Public Administration**

**Master of Science** in the fields of:

**Master of Science** in the fields of:
Aerospace Engineering, Chemical Engineering, Chemistry, Civil Engineering, Computer Science, Criminal Justice, Electrical Engineering, Engineering (Environmental Engineering), Engineering Science and Mechanics, Human Environmental Sciences, Marine Science (Biology), Mechanical Engineering, Metallurgical Engineering, Nursing, and Operations Management.

**Master of Social Work**

**Master of Tax Accounting**

**Educational Specialist** in the fields of:
Counselor Education, Educational Leadership, Educational Psychology, (including general educational psychology, educational research, and school psychology), Elementary Education, Special Education, and Secondary Education.

**Doctor of Education** in the fields of:
Counselor Education, Educational Administration, Educational Psychology, Elementary Education, Higher Education Administration, Instructional Leadership, School Psychology, Secondary Education, and Special Education.

**Doctor of Musical Arts**

**Doctor of Nursing Practice**

**Doctor of Philosophy** in the fields of:
Accounting, Aerospace Engineering and Mechanics, Anthropology, Applied Mathematics, 
Applied Statistics, Biology, Chemical Engineering, Chemistry, Civil Engineering, 
Communication and Information Sciences, Computer Science, Counselor Education, 
Economics, Educational Administration, Educational Psychology, Educational Research, 
Electrical Engineering, Elementary Education, English, Finance, Geology, Health 
Education/Promotion, Higher Education Administration, History, Human Performance, Human 
Resources Management, Instructional Leadership, Marketing, Materials Science, Mathematics, 
Mechanical Engineering, Materials/Metallurgical Engineering, Operations Management, 
Physics, Political Science, Psychology, Romance Languages, School Psychology, Secondary 
Education, Social Work, and Special Education.
4.2 CONFERRING OF DEGREES

Advanced degrees are conferred in commencement exercises at the close of each semester. Each candidate for a graduate degree must submit a completed application for advanced degree to the Office of the Graduate School at the time of registration for the fall or spring semester or the first term of the summer session in which requirements for a degree are to be completed. All graduate students must have a Graduate School approved application for Admission to Candidacy for a degree well in advance of filing the application for a degree. All doctoral and educational specialist students must have submitted an approved Plan of Study. Doctoral students must have an approved Plan of Study to the Graduate School by the end of the semester in which they will complete 30 credit hours for the doctoral degree. (For details, please refer to the Catalog’s sections on plan of study and candidacy for master’s, educational specialist, and doctoral degrees.)

At least one week before commencement, the candidate's record must have been cleared for graduation. A candidate for the doctoral degree must be present at a scheduled commencement to receive the degree, unless excused by the graduate dean. The University of Alabama reserves the right to withhold or withdraw an advanced degree on the recommendation of the graduate faculty.

ACADEMIC MISCONDUCT

All acts of dishonesty in any work constitute academic misconduct. This includes, but is not limited to, cheating, plagiarism, fabrication of information, misrepresentation, and abetting any of the above. The Academic Misconduct Disciplinary Policy will be followed in the event that academic misconduct occurs. Students should refer to Appendix C of the online Faculty Handbook for the Academic Misconduct Disciplinary Policy.
4.3 APPLICATION

Required Materials for All Applicants
Please apply online for graduate study at the Graduate School’s website. Interested persons with restrictions that prevent the use of our online application or who have questions about applications should contact The University of Alabama, Graduate School, Box 870118, Tuscaloosa, AL 35487-0118; telephone (205) 348-5921 or 1-877-UAGRADS; fax (205) 348-0400; or e-mail usgradapply@aalan.ua.edu (U.S. citizens and U.S. permanent residents) or intergradapply@aalan.ua.edu (international applicants).

All applicants, including U.S. citizens, permanent residents, and international applicants, must submit the following materials to the Graduate School using the online application:

- Applicant data sheet and statement of purpose
- One official copy of all college or university transcripts sent at the applicant’s request to the Graduate School directly from the registrar of each postsecondary institution attended (including The University of Alabama)
- Admissions test scores less than five years old (if required by the department; see Section 4.4 on “Admissions Examination Criteria” for departments that do not require a test) mailed to the Graduate School directly by the testing service
- The application fee is $50 for U.S. citizens and permanent residents and $60 for international applicants. You may submit your credit card information online or mail the completed Application Fee Form (.pdf version) along with your check or money order (drawn on U.S. banks and made payable to The University of Alabama) directly to the Graduate School. Application fees are non-refundable.
- Three letters of recommendation. Recommendations may be substituted online by logging in to ‘Manage Supporting Documents’ or through postal mail. Complete information for the submission of letters of recommendation can be found at http://graduate.ua.edu/application/forms/letrec.html. These should be submitted directly to the department to which the applicant is applying (not to the Graduate School). Each applicant must have a letter of reference from at least one professor in (a) his or her undergraduate major, or (b) the proposed field of graduate study, if any courses have been taken in either area within the last five years
- Additional application materials (e.g., portfolios, writing samples, responses to essay questions, etc.) required by individual departments. Applicants should contact departments directly for more information and visit ‘Manage Supporting Documents’ for a list of documents may currently be uploaded.

All of the above materials must be received by the Graduate School before an application will be considered. To ensure that no materials are missing, applicants should periodically check the status of their applications online or by telephoning the Graduate School.

Application may be made to only two programs at a time, and at no time may a student be enrolled in more than two programs. A person holding a bachelor's degree from a U.S. regionally accredited institution (or the foreign equivalent for an international applicant) is eligible for consideration for admission to the Graduate School of The University of Alabama. Seniors who have completed at least 91 undergraduate credits at regionally accredited institutions are also eligible to apply.

If a student applies but does not complete any coursework within 12 months of the requested entrance date, a new application and an accompanying appropriate fee must be submitted.

Additional Materials for International Students
A student, whether an international or a permanent resident, whose first language is not
English, must submit an official score report from one of the following proficiency examinations:

- **Test of English as a Foreign Language** (TOEFL). The minimum score for admission to a degree program or for non-degree admission is 550 on the paper-based TOEFL or 79 on the internet-based TOEFL (iBT).
- **International English Language Testing System** (IELTS). The minimum score for admission to a degree program or for non-degree admission is 6.5.
- **Pearson Test of English** (PTE). The minimum score of admission to a degree program or for non-degree admission is 59.

The TOEFL, IELTS or PTE scores must be less than two years old at the time of the student's intended enrollment at The University of Alabama. The TOEFL, IELTS or PTE will not be required from any applicant who has earned a degree from an accredited U.S. college or university within the past three years. The Test of Spoken English (TSE) is recommended for international students who wish to be considered for teaching assistantships. Information on registering for the **TOEFL or TSE, IELTS** and for the **PTE** is available worldwide on the web or at U.S. embassies, consulates, USIS offices, Institute of International Education offices, AMIDEAST offices, and other organizations concerned with international education.

International applicants must submit one certified copy in the native language along with certified precise word - for - word English translations of all transcripts, diplomas, and certificates of degree. To be acceptable, transcript and diploma copies must be certified by the issuing institution. Notary copies are NOT acceptable. Documents should be received in official sealed university envelopes.

**Application Deadlines**
To ensure adequate time for review, applications must be completed at least six weeks before the desired date of registration. International applicants are encouraged to have completed applications (including all supporting materials) at least 6 to 8 months in advance of the desired term of enrollment. International applicants must have completed applications no later than four months prior to expected enrollment. However, **many departments establish earlier deadlines** for receipt of application materials. (Applicants should contact their proposed departments for deadline information.) In those cases, completed applications must be in the Graduate School six weeks prior to the departmental deadline. **Requirements and deadlines for submitting applications are subject to change; applicants should review the specific instructions on the application forms for current requirements and deadlines.**

**Alabama Residency Status**
Questions regarding **resident and nonresident status** should be directed to the Office of Academic Records and University Registrar, Box 870134, Tuscaloosa, AL 35487-0134; telephone (205) 348-1572. (Note. This is not the same as the “residency” requirement for master’s, educational specialist, or doctoral degrees. Please refer to those degrees’ respective sections of the Catalog for details.)

**Immunizations**
New students who were born after January 1957 are required to provide proof of immunization against measles, mumps, and rubella (MMR) and other diseases before being officially enrolled at The University of Alabama. For students without proof of all required immunizations, the Health Center may assess a fine, and registration may be blocked. Also, new students are encouraged to complete a medical history form, which may be obtained from The University of Alabama, **Student Health Center**, Box 870360, Tuscaloosa, AL 35487-0360.

**Change of Major or Purpose**
All students changing their majors or degree levels will be required to submit new
applications. Students pursuing doctorates in the College of Education should consult the College of Education section of this catalog for additional requirements. Graduate courses taken by a senior cannot also be applied to the undergraduate career.

Application Fees
A nonrefundable application fee must accompany each new application for admission before it will be processed. The application fee for U.S. citizens and permanent residents is $50; for international applicants the fee is $60. Credit card payments may be made with online applications at the [Graduate School's website](http://graduate.ua.edu/catalog/14200.html). After admission, no fee will be assessed for subsequent applications requesting a change of program area, change of degree objective within the program of study, or change of status from non-degree to a degree program. If a student applies but does not complete any coursework within 12 months of the requested entrance date, a new application and an accompanying appropriate fee must be submitted.

Number of Applications
Application may be made to up to two programs at a time. If a student applies to two programs, he or she must submit two separate and complete sets of application materials (applicant data sheet, statement of purpose, letters of recommendation, transcripts) and two application fees. Each set of application materials must clearly identify the program to which the applicant is applying.
4.4 ADMISSION CRITERIA

The Graduate School makes admission decisions based on a composite of qualitative and quantitative information that include, but are not limited to, the following: the applicant's statement of purpose, letters of recommendation, the academic standing of the student in program(s) in which the applicant has studied, relevant professional activities and achievements, admissions test scores, previous grades, and the recommendation of the faculty in the area to which the applicant is seeking admission. Each application is considered in the context of other applications to the same area, with due consideration given to the availability of space in the program at the time the student applies, the need to maintain a pool of students of superior potential, and other goals of the program. A department may set higher admission standards for doctoral students. Not every student whose credentials meet stated quantitative standards is admitted.

A person holding a bachelor’s degree (or who is a senior) from a U.S. regionally accredited institution (or the foreign equivalent for an international applicant) is eligible for consideration for admission to the Graduate School of The University of Alabama.

An applicant may apply to only two programs at a time and, upon acceptance to each, pursue only two programs at a time. Application to each program will be considered separately. The timeline for each program is based on the admission term for each, the degree completion requirements of each, and so forth. A student who pursues two programs must apply for candidacy and meet the degree requirements for each program. See Degree Requirements for additional information.

Persons are admitted to a specific program of study as specified on the application. A request for a change of program or continuation beyond an original purpose is viewed as a new application and is subject to current procedures and standards.

Admission to graduate studies at The University of Alabama is valid for 12 months after the requested entrance date. In some departments, students must seek pre-approval if they wish to change the entrance date initially requested on their applications. International students requesting a change in their entrance date should also be aware that their TOEFL, IELTS or PTE scores must be less than two years old at the time of initial enrollment at the University. Should the TOEFL, IELTS or PTE become more than two years old prior to enrollment, the student will be required to retest and submit an acceptable score prior to enrolling. If a student applies but does not complete any coursework within 12 months of the requested entrance date, a new application and an accompanying appropriate fee must be submitted. If a student enrolls for classes but then fails to register for three consecutive years, the student must reapply for admission.

The dean of the Graduate School is the only person authorized to waive any requirement, admit applicants to the Graduate School, or otherwise notify applicants of the disposition of their applications.

Additional requirements may be stated in the divisional and departmental sections of this catalog.

Admission requirements are subject to change without prior notice. Being admitted to a graduate program does not mean that each course required in the student's program of study will be available each semester or in a specific semester.

Types of admission are described below.
Regular Admission
An applicant whose credentials meet both of the following minimum requirements may be considered for regular admission:

1. **GPA requirement:** The applicant must have an undergraduate grade point average, based on a 4.0 system, of 3.0 overall, 3.0 for the last 60 semester hours in a degree program, or 3.0 for a completed graduate degree program.

   **AND**

2. **Entrance exam score requirement:** The applicant must have a 300 on the revised GRE test or a 1000 on the GRE general test, a score at the 50th percentile on the MAT, or a 500 on the GMAT, if required by the department or degree program to which the applicant is seeking admission. (See the departmental sections of this Catalog or contact the Graduate School for specific information.) Admission test scores must be less than five years old. An applicant who wishes to be nominated by his or her department for a Graduate Council Fellowship is strongly encouraged to submit a score on the Graduate Record Examination (GRE) General Test or entrance examination appropriate to the graduate program of interest.

These are minimum requirements; divisions or departments may set higher standards.

Conditional Admission
An applicant may be considered for conditional admission if he or she meets either the GPA requirement for regular admission (GPA of 3.0) or the entrance examination score requirement for regular admission.

These are minimum requirements. Divisions or departments may set higher standards or may not consider students for conditional admission.

A graduate student removes the condition by earning an average of "B" or better in the first 12 semester hours of graduate-level work completed and by satisfying any other conditions specified by the department or the Graduate School at the time of admission. If the 12 hours are completed in a term in which the total credits exceed 12, the evaluation is made on the basis of all graduate-level work completed at the end of that term of enrollment. Failure to remove the condition within the first 12 hours of graduate work will result in the student's being dropped from the program. A student who satisfies the condition will assume automatically the status of a regularly admitted graduate student.

Readmission
Applicants for readmission who are in good standing should write to The University of Alabama, Graduate School, Box 870118, Tuscaloosa, AL 35487-0118 or e-mail gradschool@ua.edu, at least six weeks in advance of the desired date of registration to request registration materials. Some departments may have earlier deadlines; applicants should contact their departments for specific deadlines. For students without proof of all required immunizations, the Health Center may access a fine, and registration may be blocked.

Readmission of Service Members
The University complies with laws concerning readmission of service members.

A student who has been admitted to or enrolled in The University of Alabama Graduate School may ask for a military leave to fulfill a U.S. military obligation. The student should notify the Dean of the Graduate School of a call to military service and provide documentation. Upon return from military service, the student also should notify the Dean of the Graduate School of the intent to return to graduate school and provide documentation of honorable discharge.

A student called to active military duty, unless dishonorably discharged, and eligible for...
readmission as defined by law, will receive an extension of the degree time limit equal to the
term of eligible service, with a cap on the number of years in the extension. The extension is
subject to the 5-year limit as applicable to readmission provisions in the Higher Education
Opportunity Act of 2008 (Section 484C of the HEA) and implementing regulations in 34 CFR
Section 668.18.

ADMISSIONS EXAMINATION CRITERIA

Graduate admission examinations are required for applicants to most programs and must be
less than five year old. Most departments require a score of 300 on the revised GRE test or a
1000 on the GRE general test. Some departments may allow substitution of the Miller
Analogies Test (MAT) for the GRE. Applicants to the Manderson Graduate School of Business
are required to submit acceptable scores on the Graduate Management Admissions Test
(GMAT) although some departments allow the use of the GRE. Applicants should consult the
department descriptions in this catalog or contact departments directly for more specific
information about admissions examination requirements.

The following departments have received approval to eliminate or modify criteria for graduate
admissions test scores:

- **Art (studio art):** No admissions test required for any applicant. GPA of 3.0 required
  for regular admission, GPA of 2.5 required for conditional admission. NOTE: Portfolio or audition required for all applicants.
- **Creative Writing (MFA):** Admission test recommended but not required. No
  minimum admission test score. GPA of 3.0 required for regular admission, GPA of
  2.5 required for conditional admission. Portfolio required for all applicants.
- **Doctorate of Nursing Practice (DNP):** No admissions test scores required for
  post-MSN applicants. GPA of 3.0 is required. In lieu of test scores the applicant
  must provide evidence of active professional nurse licensure, advanced specialty
  certification where available, an interview with DNP faculty, and a writing sample
  outlining a scholarly project idea.
- **Engineering:** No admissions test score is required if the applicant is an
  undergraduate engineering student at the University of Alabama who is
  participating in the University Scholars Program.
- **Health Sciences, Human Nutrition, General Human Environmental Sciences,
  Consumer Science concentration (master's programs):** No admissions test
  required for regular admission if GPA is 3.0; conditional admission requires a GPA
  of 2.5 and a minimum GRE score of 300 (revised GRE test) or 1000 (GRE general
  test).
- **MBA:** An admissions test waiver will be considered if (a) The applicant has already
  completed a post-baccalaureate degree (or) (b) The applicant has 7 or more
  years of appropriate full-time post-baccalaureate work experience. Requests will
  be evaluated by the program on a case-by-case basis after a personal interview
  with the applicant.
- **Modern Languages and Classics (MA in German only):** No admissions test
  required for applications for the MA in German. GPA of 3.0 required for regular
  admission, GPA of 2.5 required for conditional admission. NOTE: Writing sample
  required for all applicants.
- **MSN:** No admissions test required for regular admission if GPA is 3.0; conditional
  admission requires a GPA of 2.5 and GRE of 900 or MAT of 40th percentile.
- **MSW program in the School of Social Work:** No admission test required for regular
  admission if GPA is 3.0; conditional admission requires a GPA of 2.5 and GRE of
  300 (revised GRE test) or 1000 (GRE general test).
- **Music:** No admissions test required for any applicant. GPA of 3.0 required for
  regular admission, GPA of 2.5 required for conditional admission. NOTE: Portfolio
  or audition required for all applicants.
- **Physics:** Admissions tests required for all applicants. Applicants may submit either the GRE General test or the GRE subject test in Physics, with a score at the 50th percentile required for regular admission.

- **Theater:** No admissions test required for any applicant. GPA of 3.0 required for regular admission, GPA of 2.5 required for conditional admission. NOTE: Portfolio or audition required for all applicants.

Information concerning the GRE is available from the Educational Testing Service, Princeton, NJ 08540. The GMAT and MAT are given by the testing services of The University of Alabama and by most colleges and universities and may be taken by appointment. Applicants should plan well in advance so the results of the required examination will be available when needed to support an application for admission. Braille editions of both the GRE and MAT can be obtained from The University of Alabama, Testing and Data Management Services, Box 870108, Tuscaloosa, AL 35487-0108.

Interested persons with restrictions that prevent the use of our online application should contact The University of Alabama, Graduate School, Box 870118, Tuscaloosa, AL 35487-0118 or 1-877-UAGRADS; telephone (205) 348-5921; e-mail gradschool@ua.edu.

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**Other Types of Admission**

**Admission to Doctoral or EDS Programs from Master's Programs in the Same Department at The University of Alabama.** In participating departments, master's students enrolled at The University of Alabama may apply for admission to doctoral or EdS programs in the same program by completing the Master's to Doctoral program application. Departments determine if submission of a statement of purpose, a new test score, or a new transcript is required. Interested students should contact their departments to ask if they accept the simplified application and if there are any additional departmental requirements.

**Expedited Admission for University of Alabama Seniors.** Undergraduate seniors in participating departments enrolled at The University of Alabama who have completed at least 91 hours, have overall GPAs of 3.0 or better, are recommended by the faculty in their departments, and wish to apply for admission to graduate study in their current fields may be eligible for an expedited admissions process by completing the Bachelor's to Master's/Doctoral program application. Students should contact the department or program for details. Students who plan to seek scholarships or fellowships are strongly encouraged to follow the application procedures outlined under "Regular Admission."

**Irregular Postgraduate (IPG) Admission.** A person who applies but is not admitted to the Graduate School may, on the recommendation of the department or division concerned and with the approval of the dean of the Graduate School, seek admission as an irregular postgraduate (IPG) student, for the purpose of attempting to qualify for admission to the Graduate School. An applicant who is denied admission must not assume that this procedure is available to all; specific instructions will be given to those who are eligible.

Work taken as an irregular postgraduate cannot be counted as graduate credit at the time it is taken or at a later date. IPG students register as undergraduates and receive undergraduate credit for all work completed. Upon completion of the required program of IPG studies (no less than 12 semester hours of advanced-level undergraduate credit taken from full-time graduate faculty of The University of Alabama), the student must request a review of the application for admission to the Graduate School within 12 months of the initial requested entrance date, or a new application accompanied by a nonrefundable application fee must be submitted.

**The University Scholars Program.** The University Scholars Program is intended for gifted and highly motivated candidates for BA and BS degrees at The University of Alabama whose objectives include degrees at the master's or doctoral level. In participating University Scholars departments, with a closely integrated undergraduate and graduate program,
qualified students begin graduate study in their senior year; such a program may lead to simultaneous completion of requirements for both master's and bachelor's degrees, each within its specified framework.

**A student may enroll in only one University Scholars program.**

Students in the University Scholars Program are classified as undergraduates until they complete requirements for their undergraduate degrees and therefore may not hold graduate assistantships until their classifications are changed to graduate status. At that time, University Scholars will also become eligible for graduate fellowships and scholarships.

Any department that offers a graduate program may, with the approval of the dean of the Graduate School, participate in the University Scholars Program. The following programs currently are approved to participate in the University Scholars Program:

- Advertising and Public Relations
- Aerospace Engineering and Mechanics
- American Studies
- Applied Statistics
- Biological Sciences
- Chemical Engineering
- Chemistry
- Civil & Environmental Engineering
- Communication Studies
- Computer Science
- Consumer Sciences
- Criminal Justice
- Economics (College of Commerce & Business Administration)
- Economics (College of Arts & Sciences)
- Electrical & Computer Engineering
- English
- Finance
- French
- Geography
- German
- Health Studies (Sports Medicine Concentration)
- Human Nutrition and Hospitality Management (Food & Nutrition Concentration)
- Mathematics
- Mechanical Engineering
- Metallurgical & Materials Engineering
- Operations Management
- Physics & Astronomy
- Political Science

The following are minimum requirements; divisions or departments may set higher standards:

**Phase I:** Admission to Phase I is by invitation of the department and the dean of the Graduate School. Admission is chiefly determined by the faculty's estimate of a student's talents, motivation, and potential for graduate study. Students may also apply for admission to Phase I through their major department during the second semester of the sophomore year. Contingent upon completion of 61 semester hours of study and with a grade point average in all courses taken of not less than 3.3 (as computed without the plus/minus system), students are admitted to Phase I at the beginning of their junior year on recommendation of the departments to which they have applied. During the junior year, students will take between four and six courses in their major field, as advised by their departments, to prepare them for the work of Phase II. Students seeking admission to Phase I will be informed by their departments if their admission requirements differ from those specified here.
Phase II: Admission to graduate study is also by invitation and is facilitated by, but not dependent upon, participation in Phase I. On completion of no fewer than 91 hours (ordinarily at the end of the junior year), students may apply for and be accepted for admission to the Graduate School. They must have grade point averages of not less than 3.3 (as computed without the plus/minus system) in all courses. Transfer students are subject to the published residence regulations and must have completed the last 30 hours in residence. Admission to the Graduate School will be granted if the student has (a) met all the criteria above as well as other minimum requirements for graduate admission (see “Admission Criteria” in this Catalog), (b) completed three-fourths of the hours required for the major and the minor, (c) met all requirements for the core curriculum, and (d) been recommended by the department to which he or she is seeking admission. (In special circumstances, departments may elect to invite an application and recommend acceptance of an applicant with a GPA of 3.0 or higher.)

Upon admission to the Graduate School, the student will begin a program of study leading to the master's or doctoral degree as approved by his or her department and by the dean of the Graduate School. The program of study for prospective University Scholars must be submitted to the Graduate School prior to the student’s enrollment in graduate classes.

The bachelor's degree normally will be awarded at the commencement immediately following satisfactory completion of the first year of graduate study and attainment of a total of 128 semester hours of credit or the minimum required by the college. Graduate-level courses (numbered 500 and above) taken in the senior year/first year of graduate study may count toward both the bachelor's and graduate degrees. No more than 15 graduate-level hours (numbered 500 and above) may be dual counted towards both the bachelor's and graduate degree. Interested students should check with their departments for specific coursework requirements. Participants in the University Scholars Program are exempt from the degree limit of 36 hours in a single department. The master's or doctoral degree will be awarded upon satisfactory completion of the requirements for these degrees. In some cases, the bachelor's and master's degrees may be awarded simultaneously; the completion of the master's degree, however, may require an additional time period.

Nondegree Admission. An individual who is interested in earning graduate credit but who is not an applicant for a graduate degree at The University of Alabama may be admitted for nondegree studies with the recommendation of the department or program in which the course is offered and approval of the Graduate School dean. Admission may be granted to a qualified student holding a bachelor's degree from a U.S. regionally accredited institution or the equivalent for international applicants, or to a graduate student in good standing at another U.S. regionally accredited graduate school. Nondegree application forms are available at the Graduate School's Website.

International applicants for nondegree status must submit transcripts (with English translations) and a diploma showing degree earned. They also must have a TOEFL score of at least 550 on the paper-based version, a score of 79 on the iBT, a 6.5 on the IELTS or 59 on the PTE. Applicants also must meet all current immigration requirements.

Nondegree admission is granted for attending special institutes and workshops, for meeting professional training requirements, for taking off-campus courses, or for special conditions approved by the dean of the Graduate School. Departments may set restrictions on the number or type of classes in which nondegree students may enroll, may limit nondegree enrollment to one semester only, or may prohibit nondegree admission. A maximum of 12 semester hours of graduate work may be taken as a nondegree student and later applied to the credit-hour requirements for a degree, if the student is later admitted to a degree program. Individuals enrolled as nondegree students cannot register for more than 12 hours without providing written verification to the Graduate School that they do not plan to pursue graduate degrees at the University. No more than 12 semester hours of this nondegree coursework can be evaluated for degree credit. Application of any nondegree credit toward an advanced degree will be contingent upon an evaluation made after the student has been admitted to the Graduate School to pursue a degree program. Responsibility rests with the student to observe the limitations imposed on credit hours, coursework, and transfer of

http://graduate.ua.edu/catalog/14300.html
credit. Procedures and online application for this type of admission are available at the Graduate School's Website. Students who have had an application to a degree program formally rejected are not eligible for nondegree status.

If a student is not eligible for consideration for conditional or regular admission to a degree program, the grades the student earns as a nondegree student will not make the student admissible for the degree program.

Each student taking nondegree courses through the University's programs offered at international sites must submit an official transcript (with an English translation) and a diploma showing a bachelor's degree from a U.S. regionally accredited institution (or the equivalent for an international applicant).

Nondegree students are not permitted to hold graduate assistantships. Nondegree students may not be eligible for federal financial aid and loan programs. For more information, contact the Office of Student Financial Aid, Box 870162, Tuscaloosa, AL, 35487-0162; telephone (205) 348-6756.

Admission of International Students. Applicants who are citizens of countries other than the United States are welcome at The University of Alabama. Highly qualified students from around the world have been extremely successful in our graduate programs, and the contributions made by our international students in the areas of teaching, research, and general cultural enrichment have been great. Standards for admission and financial aid are extremely competitive, ensuring academic excellence.

Interested students should visit our online application center to apply electronically. Applicants with restrictions that prevent the use of our online application should contact the Graduate School, Box 870118, Tuscaloosa, AL 35487-0118, U.S.A, e-mail gradschool@ua.edu. The request should contain information on the student's citizenship, formal academic preparation, English language ability, standardized test scores, financial situation, proposed major, and date of entry. Requests for application materials receive initial reviews from the Graduate School dean's office.

The fall semester begins in August and is considered the beginning of the academic year, and international students are strongly advised to plan to begin their studies then. Many of our departments and programs will consider applications for the spring semester, which starts in January, but fewer openings for new students are available at that time.

The University of Alabama recognizes that, to be accurately evaluated, applications from international students require more time and more supporting information than do domestic applications. For this reason, international applicants applying from outside the U.S. are encouraged to have complete applications, with all supporting documents, at least 180 days before the beginning of the semester for which application is made. All applications must be complete at least 120 days before the beginning of the semester for which application is made. Some departments have earlier deadlines; applicants should contact the departments in which they are interested to obtain information about department deadlines and other requirements. Applications completed after the deadline will automatically be considered for the following semester. The student whose application is completed well in advance of our deadlines is more likely to be admitted and to receive admission and immigration materials in time to make travel arrangements.

Each international application must hold the equivalent of a U.S. four-year bachelor's degree from an accredited institution to be eligible for graduate admission. While individual departments may have more stringent requirements, bachelor degrees from Bologna Accord certified institutions are considered to meet this criterion.

A student whose first language is not English must submit an official score report for the Test of English as a Foreign Language (TOEFL), the International English Testing System (IELTS)
or the Pearson Test of English (PTE). The minimum score for admission to a degree program or for nondegree admission is 550 on the paper-based TOEFL or 79 on the iBT. The minimum IELTS score for admission to a degree program or for non-degree admission is 6.5. The PTE minimum score for admission to a degree program or for non-degree admission is 59. TOEFL, IELTS or PTE scores must be less than two years old at the time of intended initial enrollment at The University of Alabama. Should TOEFL, IELTS or PTE scores become more than two years old prior to enrollment, the student will be required to retest and submit an acceptable score before enrolling. The TOEFL, IELTS or PTE will not be required from any applicant who has earned a degree from an accredited U.S. college or university within the past three years. The Test of Spoken English (TSE) is recommended for international students who wish to be considered for teaching assistantships. For information on registering for the TOEFL, or TSE available worldwide, IELTS and PTE visit the testing center websites or contact U.S. embassies, consulates, USIS offices, Institute of International Education offices, AMIDEAST offices, and other organizations concerned with international education.

The University of Alabama offers intensive English language instruction to prepare students for further academic study at colleges and universities in the United States. In addition, the University maintains (through the English Language Institute) the International Teaching Assistant Program (ITAP), a program that all graduate assistants with any teaching or instructional activities who are non-native speakers of English must successfully complete before they are allowed to teach. Students are recommended for ITAP by their departments. For information about these programs write to the Director, English Language Institute, Box 870250, Tuscaloosa, AL 35487-0250, U.S.A. Admission to the English Language Institute does not constitute admission to a graduate program at The University of Alabama.

Students whose applications to the Graduate School are approved will receive housing and health-service information, a letter of admission, and an immigration document (usually Form I-20 or DS-2019). Upon arrival in Tuscaloosa, students should report to Capstone International Programs and Services in order to obtain registration materials and information on the special orientation session for international students that is held prior to the beginning of each semester.

Nonresident foreign students who are offered graduate assistantships are limited to a maximum .50 FTE (half-time) assistantship. Additional employment outside the University is not permitted.

Students are encouraged to direct any questions they may have concerning immigration, housing, or the health service to the Director, Office of International Student and Scholar Services, Box 870304, Tuscaloosa, AL 35487-0304, U.S.A. Questions concerning admission procedures should be directed to the Graduate School.

Requirements and deadlines for submitting applications are subject to change; applicants should review the specific instructions on the application forms for current requirements and deadlines.

Provisional Language Admission for International Graduate Students. An international graduate applicant to The University of Alabama may be considered for provisional language admission if he or she does not meet the minimum TOEFL score requirement of 550 on the paper-based TOEFL or 79 on the iBT, 6.5 on the IELTS or 59 on the PTE. An applicant may be reviewed for consideration for possible provisional language admission if he or she has a lower TOEFL, IELTS or PTE score or has not taken the TOEFL, IELTS or PTE. The applicant must meet all other admission criteria as stated for regular or conditional admission earlier in this Catalog, meet all financial and immigration requirements, and be recommended by the individual University of Alabama graduate department to receive provisional language admission. A student holding provisional language admission may not hold an internally funded graduate assistantship.

Students who have provisional language admission are accepted to the Graduate School but must attend full-time intensive English language instruction at the English Language Institute (ELI). The student must complete the ELI’s Intensive English Program with a minimum GPA of
3.5 in the advanced levels (levels 4, 5, and 6) or earn a score of at least 550 on the paper-based TOEFL or 79 on the iBT, or 6.5 on the IELTS before he or she will be allowed to enroll in graduate courses, hold teaching assistantships, or hold internally funded research assistantships. Students who have provisional language admission are eligible to hold only externally funded research assistantships.

**NOTE:** In special circumstances, a student may initiate the following requests to his or her department chair. The student's request and the specific course to be taken must be approved by the student's department, advisor, course instructor, ELI, and the Graduate School:

a. *if a student has a TOEFL score of at least 500 on the paper-based TOEFL or 61 on the iBT, an IELTS score of at least 6.0, PTE score of at least 52 or initially places in ELI level 5 or 6, then after official evaluation by ELI staff, he or she can be considered for approval to take one carefully selected graduate level course per semester for a maximum of two semesters while completing ELI,* or

b. *if student has enrolled in and completed ELI Level 4, 5, or 6 with a 3.5 GPA, he or she can be considered for approval to take one carefully selected graduate level course per semester for a maximum of two semesters while completing ELI.*

c. *If a student have an institutional TOEFL score of 500 and either has completed ELI Level 4, 5, or 6 with a 3.0 GPA or has placement into ELI Level 5 or 6, he or she can be considered for approval to take one carefully selected graduate level course per semester for a maximum of two semesters while completing ELI.*

When a student with provisional language admission begins enrollment in graduate courses, he or she must meet all other requirements for conditional admission, as in the Admission Criteria section of this Catalog.

International graduate applicants should inform the Graduate School that they wish to be considered for provisional language admission, when they submit their graduate application forms.

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**International Bridge Program.** According to current University of Alabama graduate policy, "each international applicant must hold the equivalent of a four-year bachelor's degree from an accredited institution to be eligible for graduate admission." The University of Alabama International Bridge Program is intended for the international graduate applicant who holds a three-year bachelor's degree from a country where that credential is not deemed equivalent to the four-year U.S. bachelor's degree. By completing a fourth year, or bridge year of undergraduate study at The University of Alabama, an international student from a recognized foreign institution with a three-year bachelor's degree will have the opportunity to enter graduate study without completing a separate four-year bachelor's degree. The student will complete a "bridge year" of University of Alabama undergraduate coursework and then begin the graduate degree program.

International applicants interested in the **International Bridge Program** should consult the list of participating departments that are approved to accept applications for the bridge program. If the intended major is listed as participating, then the international applicant will apply for the International Bridge Program following the same graduate application process as other international graduate applicants to the degree program. International applicants may apply electronically using the **Graduate School's website** or the print application forms. International applicants meeting the Graduate School's and department's minimum GPA, GRE, and TOEFL requirements for regular admission to a graduate degree program and who receive the department's recommendation will be considered for admission in the International Bridge Program. Students admitted into the International Bridge Program will hold a regular graduate admission for a degree program, but will first complete the bridge year of University of Alabama undergraduate coursework and then begin graduate study to complete their graduate degree program.
Each department that participates in the International Bridge Program will provide a written description and specific departmental requirements for their bridge students. Bridge year requirements include the following, at a minimum:

- A student in the International Bridge Program will be classified as an international bridge student while he or she completes the bridge year. The bridge year is defined as a 30 semester hour undergraduate curriculum designed to meet basic core curriculum requirements missing from the three-year international degree. A student's course load during the bridge year may not exceed a total of 15 hours per semester.
- Each graduate program participating in the bridge year program will provide a list of specific undergraduate courses required for their international bridge students. Each department's program will include 6 undergraduate credits of specific courses in each of the following five general curriculum areas: (a) written English proficiency, (b) information technology or mathematics, (c) humanities and fine arts, (d) history and social-behavioral sciences, and (e) natural sciences.
- During the time the student is classified as an international bridge student, he or she will be eligible to hold only externally funded research assistantships, and departments will provide careful review of the student's course load and academic progress before granting assistantships. An international bridge student may not hold an internally funded graduate assistantship or fellowship.
- International bridge students must complete the bridge year and earn at least a 3.0 GPA for all coursework completed during the bridge year before progressing into the graduate degree program.
- All courses for the bridge program must be completed through The University of Alabama (no transfer credit). Courses completed as part of the student's three-year international degree may not be repeated for credit in the bridge program at the University.
- Upon successful completion of all bridge year coursework and other department requirements, the department will consider the student for approval to take coursework in the graduate degree program and for possible graduate assistantships and fellowships. The graduate degree will be awarded upon satisfactory completion of the graduate degree requirements.

Admission of Faculty Members for Graduate Work. The University normally does not permit members of its own faculty to earn advanced degrees from the University. A faculty member who wants an exception to this rule must present an extremely compelling case and must receive prior approval from (1) the dean of the Graduate School, (2) the dean of the division in which the faculty member holds appointment, (3) the dean of the division in which the faculty member wants to study, and (4) the executive vice president and provost. A faculty member seeking an exception to the rule should begin by arranging an appointment with the dean of the Graduate School.

Seniors at The University of Alabama Taking Graduate Credit. A senior at The University of Alabama who has completed no fewer than 91 hours and has earned at least a 3.0 grade point average overall may petition to take graduate courses toward a graduate career. Permission to take a particular course is granted based on approval by the instructor, the instructor's department chairperson, the dean of the student's division, and the graduate dean. The total course load for an undergraduate taking graduate courses should not exceed 15 hours a semester. A senior may accumulate no more than 9 hours of graduate credit. With the exception of seniors officially admitted to the University Scholars Program, graduate courses taken by a senior cannot also be applied to the undergraduate career.
4.5 REGISTRATION

4.5.1 General Requirements
Any graduate student utilizing the assistance of a faculty member or any facility of The University of Alabama in relation to a degree program must be registered in an appropriate course reflecting that activity. This includes such activities as coursework, thesis and dissertation advising and reading, comprehensive examinations, and other degree requirements. Registration in courses numbered 599 (Thesis Research), 699 (Dissertation Research), 598 (Master's Research), and 698 (Doctoral Research) may be repeated.

Prerequisites
If the student's undergraduate preparation in either the major or minor subject is considered inadequate, certain preliminary (undergraduate and/or graduate) courses will be prescribed by the department or school concerned. These courses become prerequisites and do not carry graduate credit. They must be taken, if possible, during the first semester of enrollment.

Plan of Study
The student's plan of study is determined in consultation with the head of the major department or the chairperson of the graduate committee and is approved by that person and the dean of the Graduate School.

Course Loads
The normal course load for a fall or spring semester is 12 credit hours; the maximum course load for a semester is 15 credit hours. Full-time enrollment for graduate students is 9–15 hours per regular semester.

Students may register for a maximum of 6 semester hours in a summer term or 12 hours during an entire summer dual session. No more than 3 semester hours may be taken during the Interim session. Taking more than 12 semester hours in a summer dual term can be justified only in extraordinary circumstances and requires written approval of the Graduate School. A student who is employed part-time is expected to take a reduced load. The course load of a fully employed student will be evaluated according to the individual graduate program. Fully employed students should be registered in no more than one course plus thesis or dissertation research.

Failure to Register for Three Years
If a student fails to register for three consecutive years, the student must reapply for admission. If readmission is granted, previous credit earned may be out of date and therefore not applicable toward a degree. See sections titled "Time Limits" for each degree in this catalog.

4.5.2 Assistantships: Admission Status, Class Hours, and FTE Level
Students with regular or conditional admission status may hold graduate assistantships. A minimum GPA of 3.0 must be maintained while holding any assistantship, except during the first 12 graduate semester hours earned at UA. Students who have earned academic warning or are in non-degree status may not hold graduate assistantships of any kind.

A conditionally admitted student whose graduate GPA falls below 3.0 at any time during the conditional status will not be allowed to hold a graduate teaching assistantship until such time as the GPA has increased to 3.0 or better. A student with provisional language admission status may hold only an assistantship that is externally funded through a contract or grant; he or she may not hold a permanently budgeted UA assistantship.

The FTE from ALL assistantships, plus any other on-campus employment, must be combined when determining FTE (Full-Time Equivalent) status.
Each graduate assistant must be a full-time graduate student. Full-time status here means 12 or more graduate semester hours of classes; however, the FTE level of the assistantship assignment is converted to equivalent credit hours and combined with actual class hours in order to meet the full-time requirement. A quarter-time assistantship (0.25 FTE) equates to 3 class hours and a half-time assistantship (0.50 FTE) equates to 6 class hours. This means that a student who has, for example, the typical 0.50 FTE assistantship needs to register for only 6 class hours in order to meet the full-time requirement (6 assistantship equivalent hours plus 6 actual class hours).

**Overloads Involving Just Courses**
The Graduate School does not need to approve overloads involving just courses, unless the **number of course hours exceeds 15** (which is the maximum Banner will permit without special approval by the Graduate School).

**Overloads Involving Assistantship FTE Plus Courses**
The Graduate School also does not need to approve combined FTE + course hour loads **that are within the table guidelines below**.

The table below includes the Graduate Council’s maximum recommended combinations of FTE plus course hours. Combinations of assistantship FTE in excess of 0.50 are prohibited.

<table>
<thead>
<tr>
<th>Combined FTE of All Assistantships</th>
<th>Recommended Range of Graduate Course Hours the Student is Taking</th>
</tr>
</thead>
<tbody>
<tr>
<td>.25</td>
<td>9-15</td>
</tr>
<tr>
<td>.50</td>
<td>6-12</td>
</tr>
</tbody>
</table>

The Graduate School continues to urge caution when considering large course loads and will continue to monitor overloads even though prior approval is not needed. We especially monitor whether or not academic warnings and suspensions increase and, if they do, we track the student’s and department’s overload history for signs of a correlation. We hope and expect that student loads will be designed intelligently to provide meaningful yet not burdensome GTA and GRA experiences, while allowing students to move efficiently through their degree programs.

Caution also is urged when considering an **underload**, i.e., course hours below the recommended minimum for a particular FTE level in the previous table. Underloads risk the student’s not making adequate progress toward degree completion. Underloads typically occur only in the final semester and only to avoid taking needless extra course hours to meet the minimum number of hours normally expected for a particular FTE level.

For fall and spring semesters, a graduate student must be enrolled in classes to hold an assistantship. For interim and/or summer, it is not required that a graduate student be enrolled in classes to hold an assistantship.

Please note that full-time status here is not the same as that required for other registration and financial situations. For example, fellowships, financial aid regulations, resident visa rules, the UA System Cooperative Exchange Program, INS and IRS regulations, and other academic policies use different status definitions with regard to full-time. For more information, please refer to the department(s) administering these other programs.

**Part-Time Temporary Instructors**
A graduate student employed as a part-time temporary instructor (PTTI) to teach a credit-bearing course must meet the SACS 18-hour requirement. Such PTTIs do not receive tuition waivers, must pay taxes on the income they earn as PTTIs, and must comply with **Personnel Policies for Student Employees of The University of Alabama**.

**Class Attendance**
Graduate students are subject to the same rules regarding class attendance, the performance
of assigned tasks, and course examinations as undergraduate students. Since graduate work presupposes specialization and thorough investigation, students will not be permitted to overload themselves with courses.

**Continuous Registration for Doctoral Students**

See graduate catalog (Section 4.6) for details on the requirements for continuous registration for doctoral students.

**Graduate Credit**

A student must be admitted to the Graduate School and must register as a graduate student in order to receive graduate credit. Approval for graduate registration must be obtained from program advisors prior to registration. No graduate credit may be earned by correspondence study or for experiential learning not conducted under the direct supervision of The University of Alabama.

**Satisfactory Academic Progress Requirements for Federal Financial Aid Recipients**

All students at The University of Alabama who receive federal financial aid must make satisfactory academic progress toward completion of their degrees within a reasonable period of time. Satisfactory academic progress criteria may be obtained from the Office of Student Financial Aid, Box 870162, 106 Student Services Center, Tuscaloosa, AL 35487-0162; phone (205) 348-6756, fax (205) 348-2989.
4.6 CONTINUOUS DISSERTATION REGISTRATION FOR DOCTORAL STUDENTS

Continuous Dissertation Registration for Doctoral Students
Once a student has met the requirements for admission to candidacy, received approval for the dissertation research proposal, or initiated enrollment in 699 (dissertation research for a doctoral degree), the student must pursue completion of the dissertation without interruption by enrolling each fall and spring semester of the academic year for at least 3 hours of dissertation research. Summer enrollment for 699 Dissertation Research is expected if the student is working on the dissertation and using any University facilities or resources, including faculty time.

The continuous registration requirement is applicable whether or not the student has submitted an official Application for Admission to Candidacy form. The only exception is for DMA students who complete a document rather than a dissertation. DMA students may register for one hour of document research during a semester but must maintain continuous enrollment. A PhD student must have completed a minimum of 24 hours of dissertation research credits upon completion of the dissertation. An EdD student must have completed a minimum of 12 dissertation research credits upon completion of the dissertation. The amount of dissertation research for which a student enrolls in any given semester should be commensurate with the progress a student is expected to make on the dissertation, as well as reflective of the extent to which University facilities and faculty time are invested in the proposed activities.

To assist faculty and students in determining the appropriate registration for doctoral research, the following guidelines are recommended.

Three semester hours. Little or no progress will be made on the dissertation, only minimal use of University facilities will be involved, and/or there will be only slight faculty contact with the student; the work and writing of the dissertation are complete and only final grammatical corrections and the oral examination on the dissertation remain to be accomplished.

Six semester hours. The student will be devoting approximately one-half of a full-time academic load to the dissertation. Moderate progress on the dissertation is expected of the candidate, only limited use of University facilities will be involved, and/or faculty contact with the student will be limited.

Nine semester hours. The student will be devoting approximately three-fourths of a full-time load to the dissertation. Substantial progress on the dissertation is expected of the student, there will be major use of University facilities, and/or considerable faculty contact with the candidate is anticipated.

Twelve semester hours. The student will be working full-time academic on the dissertation. Extensive progress on the dissertation is expected, there will be considerable use of University facilities, and/or faculty contact with the student will be extensive.
THE UNIVERSITY OF ALABAMA GRADUATE CATALOG

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4.7 WITHDRAWALS, LEAVE OF ABSENCE & MILITARY LEAVE

4.7.1 Withdrawal from a Course

A graduate student who desires to withdraw from a course may do so, with the approval of the student's advisor or department head, during the period allowed for dropping a class. It is the student's responsibility to review the Graduate School's deadlines for the specific date by which one may drop a course.

No notation of courses attempted will be made on the permanent record of a student who withdraws from the University during the first week of a regular semester or the first week of a summer session. After the first week of classes, the fact of withdrawal from a course will be noted on the student's permanent record. It is the student's responsibility to consult the semester's schedule of classes for the specific date by which one may withdraw without receiving a grade notation. From the end of that period until the end of the tenth week of a regular semester or the equivalent in a five-week summer session or three-week Interim session, a student may withdraw from a course, and a grade of "W" will be assigned. Normally, graduate students are not permitted to drop a course after the tenth week.

In extraordinary circumstances beyond the student's control a student may petition the department chair to drop a course after the tenth week of class. If the department chair agrees that there are extraordinary circumstances and supports the petition, it is forwarded to the college dean. If the college dean supports the petition, it is sent to the Graduate School Dean or his designee for approval. After the tenth week, the student's academic status at the time of the withdrawal will be noted on the record ("W" for courses passing, "F" for courses failing).

Withdrawal from a course may affect several elements linked to registration and class loads, including (but not limited to) graduate fellowships, assistantships, tuition awards, financial aid, withholding taxes, etc. For more information regarding withdrawing from a course, please contact the Graduate School.

4.7.2 Withdrawal from All Courses (Withdrawal from the University)

A graduate student may withdraw from the University (i.e., withdraw from all courses in the semester), either for non-medical or medical reasons, as long as this is done prior to the last day of classes. The first thing a student considering withdrawal should do is to consult with his or her academic advisor.

It is the student's responsibility to initiate a withdrawal through myBama and provide the information necessary to complete the withdrawal process. Academic bankruptcy (described in the Undergraduate Catalog) is not available to graduate students.

Withdrawal from the University requires approval from the Office of the University Registrar (206 Student Services Center) and Dean of the Graduate School.

After the first week of a semester, the fact and date of a withdrawal from the University will be noted on the student's permanent record. After the tenth week, the student's academic status at the time of withdrawal will be noted on the record with a “W” for courses passing and an “F” for courses failing.

For a medical withdrawal, the student must contact University Health Service. A medical withdrawal cannot be granted if the graduate student has taken any finals or their equivalent (final papers, final projects, or similar assignments) for the semester for which a withdrawal is
being requested. The procedures for a medical withdrawal are available by contacting University Health Service (348-6262).

The University’s withdrawal policies can be found on the Student Receivables site.

For the different types of withdrawal, the process to initiate each one, and its impact on academic records, go to the University main web pages regarding withdrawal.

For complete details about the financial implications of withdrawals on tuition and other expenses, refer to the University’s Policies at the Student Receivables’ website.

Information about the impact of withdrawal on students receiving federal financial aid can be found on the Student Receivables’ website.

Details concerning the Impact of Withdrawal on Institutional and Non-Institutional (Non-Federal only) Loans and Scholarships if no Federal Aid is Involved are on the Student Receivables website.

4.7.3 Leave of Absence

Under compelling circumstances beyond the student’s control, a graduate student may request that the department petition the Graduate School with the rationale for granting a leave of absence. If granted by the Graduate School, a leave of absence will cover one or more upcoming semesters rather than any prior semester(s). A leave is not a method of avoiding continuous registration requirements, and it does not lengthen the time limit. When a student returns from a leave of absence, the Graduate School must be notified and will work with the department and student to determine the number of semesters remaining on the time limit and the degree requirements that remain.

Military Leave

The University complies with laws concerning readmission of service members.

A student who has been admitted to or enrolled in The University of Alabama Graduate School may ask for a military leave to fulfill a U.S. military obligation. The student should notify the Dean of the Graduate School of a call to military service and provide documentation. Upon return from military service, the student also should notify the Dean of the Graduate School of the intent to return to graduate school and provide documentation of honorable discharge.

A student called to active military duty, unless dishonorably discharged, and eligible for readmission as defined by law, will receive an extension of the degree time limit equal to the term of eligible service, with a cap on the number of years in the extension. The extension is subject to the 5-year limit as applicable to readmission provisions in the Higher Education Opportunity Act of 2008 (Section 484C of the HEA) and implementing regulations in 34 CFR Section 668.18.
Many departments and programs produce manuals, procedures and policy guides, graduate student handbooks, and other publications for their students and faculty in graduate programs. These statements are designed to provide detailed and useful information; however, they are not statements of official policy of The University of Alabama. In all matters, the graduate catalog of The University of Alabama contains official policies as passed by the graduate faculty's Graduate Council and shall supersede departmental, program, or college publications.

Degree requirements and academic performance standards outlined in this section are the minimum required. Satisfying these general requirements and standards, however, does not imply that all degree and program requirements have been met. Many departments, colleges, and schools establish additional requirements for their students. Accordingly, students may be dismissed from their programs for failure to meet departmental, college, or school standards. Such requirements are included in individual program descriptions in this catalog and/or in departmental and program manuals or policy statements. These special requirements shall not be considered in conflict with this catalog and shall have the same force as this catalog.

Dismissal from a degree program also results in suspension (dismissal) from the Graduate School.

Academic Standing

A graduate student must have a cumulative grade point average of 3.0 or better on all graduate work undertaken at The University of Alabama in order to be in good academic standing.

A student conditionally admitted to the Graduate School who has a cumulative grade point average of 3.0 or better after undertaking 12 semester hours of coursework at The University of Alabama and satisfies any other admit conditions specified by the department or The Graduate School will have earned good academic standing. Failure to do so will result in Academic Suspension (dismissal) from the Graduate School. If the 12 hours are completed in a term in which the total credits exceeds 12, the evaluation is made on the basis of all graduate-level work completed at the end of that term of enrollment.

A graduate student with good academic standing whose GPA drops below 3.0 at any time after earning 12 semester hours will have earned Academic Warning. Students who have earned academic warning or are in non-degree status may not hold graduate assistantships. Academic Warning must be removed by raising the overall grade point average to 3.0 or better during the 12 hours of graduate work immediately following the period in which the warning was earned. Failure to do so will result in Academic Suspension (dismissal) from the Graduate School.

"I" (incomplete) or "N" (no grade submitted) Grades

"I" and "N" grades are calculated in the student's overall grade point average as an "F." They must be removed within four weeks during the next term of enrollment if the student's overall grade point average drops below a 3.0 as a result of the “I” or “N” grade(s).

Conditionally admitted students who fail to bring their overall GPA back up to a 3.0 or better by removing the "I" or "N" within the four weeks will earn Academic Suspension (dismissal) from the Graduate School.
Graduate students with good academic standing who fail to bring their overall GPA back up to 3.0 or better by removing the "I" or "N" grade(s) within the four weeks will earn Academic Warning. Academic warning must be removed by raising the overall grade point average to 3.0 or better during the 12 hours of graduate work immediately following the period in which the warning was earned. Failure to do so will result in Academic Suspension (dismissal) from the Graduate School.

A department may dismiss a student from a degree program if there is unsatisfactory academic or other progress toward completion of the degree. As noted above, such departmental dismissal also results in suspension from the Graduate School. For additional details see Admission to Doctoral Degree Programs and Degree Requirements in this Catalog.

Repeating Courses
Courses may not be repeated for graduate credit; this includes courses initially taken on an audit basis. However, a course that is required in a student's curriculum in which a "D" or "F" is earned may be repeated for credit, upon the recommendation of the major department or program area. Both grades will be considered in the computation of the grade point average.

Readmission
A person seeking readmission to the Graduate School to pursue a program of study different from the one from which the person was suspended can initiate consideration for readmission by completing an application for admission in the Graduate School and communicating with the academic unit of the new program. The graduate faculty of the new academic unit will consider the request for readmission upon receipt of the new application, will identify in a written request to the dean of the Graduate School the compelling reasons for readmission to the Graduate School, and will state the conditions required of the student upon readmission if readmission is granted by the dean of the Graduate School. If readmission is granted, specific conditions of the readmission will be stipulated in the readmission letter to the student.

Reinstatement
A person seeking reinstatement to the same degree program after being suspended from the Graduate School can initiate consideration for reinstatement by communicating with the academic department or program from which the person was dismissed. The graduate faculty of the academic unit will consider the request for reinstatement and, if the faculty request reinstatement, they will identify in a written request to the dean of the Graduate School the compelling reasons for reinstatement and the conditions required of the student if reinstatement is granted by the dean of the Graduate School.

Clinical Components
In graduate programs that include clinical components, practicum experiences, internships, or other similar program requirements, each student's effectiveness will be given a broad-based evaluation by faculty and supervisors. Final decisions will be based on factors such as course grades, demonstrated clinical competence, personality factors, and relevant test scores. Many programs establish additional academic and/or professional requirements for their students. Failure to meet program requirements for academic progress and/or clinical components may result in the student's being dismissed from the program. Dismissal from a degree program also results in suspension (dismissal) from the Graduate School.
Graduation Requirements

Grade Point Average (GPA)
Each student must have an overall graduate grade point average (GPA) of 3.0 or better for all graduate courses undertaken at The University of Alabama. Grades below "C" are counted in computing scholastic averages, but they do not carry credit toward a degree.

Seventy-five Percent Rule
At least 75 percent of the hours taken must have been completed with grades of “A” or "B" at The University of Alabama. In applying this 75 percent rule, a maximum of 6 hours of thesis research may be counted, if appropriate.

400-Level Courses
A maximum of 6 semester hours of 400-level course credit may be accepted for a master's degree program, but only if the student receives approval from the department and Graduate School and all other conditions noted in Section 4.9 of the Graduate Catalog are met. No 400-level credit (except the 6 hours accepted toward the master's degree) may be accepted for doctoral degree programs.

Pass/Fail Courses
A maximum of 20 percent of a graduate student's required course credit may be taken on a "pass/fail" basis. Each graduate level course is either “letter grade” or “pass/fail” in the system at the time the student registers for the course. Graduate students are not permitted to change a course registration from "letter grade” to “pass/fail” or vice versa. Departments may request a change in how a course is graded for future semesters, through the submission of a course change request in the online Course Inventory Management (CourseLeaf) system.
Courses numbered 400-499 are primarily for advanced undergraduate students. Under no circumstances will coursework below the 400 level be accepted for graduate credit. Master's students may use no more than 6 hours of 400-level courses for graduate credit, and only if all of the conditions below are met:

1. The department offering the courses also offers a graduate degree.
2. Approval prior to the semester in which the coursework is to be taken is obtained from the student's graduate advisor and the Graduate School. This is done using the downloadable form cited below.
3. The course is taught by a member of the graduate faculty.
4. The course is not offered at the 500 level.
5. Graduate students in such courses do appropriate extra work and demonstrate a higher level of mastery.

General, minimum guidelines for how requirements of these courses should differ for graduate students are as follows, and typically at least two or more of the four guidelines apply to a course:

1. Graduate students should submit additional papers that require more analysis, synthesis, evaluation, and application of knowledge.
2. Graduate students should complete additional, higher-level readings.
3. Graduate students’ oral and written work should demonstrate greater depth of thought.
4. Graduate students should attend additional meetings with the professor to discuss course content in greater depth.

A downloadable version of the Form for Approval of 400-level Courses is available on the Graduate School's website.

A maximum of 6 semester hours of 400-level course credit may be accepted for a master's degree program, and only if a form for approval of 400-level coursework for graduate credit is completed and approved by the department and Graduate School prior to the semester in which the 400-level coursework will be taken. No 400-level credit (except the 6 hours accepted toward the master's degree) may be accepted for doctoral degree programs.
4.10 RECORDS MAINTENANCE AND DISPOSITION

Application Materials
For many years, The University of Alabama has subscribed to the ethical principles for confidentiality of records of the American Association of Collegiate Registrars and Admissions Officers. Following passage of the Family Rights and Privacy Act of 1974 (the Buckley Amendments), the University established policies and procedures for implementation of that legislation. The policy statement is available upon request in the Office of Academic Records and University Registrar and is published in the class schedule each fall semester.

All application materials and records, including academic records from other institutions, become the property of The University of Alabama and may not be returned to the applicant or forwarded to other institutions.

The admission credentials and application materials of applicants who do not register for courses at the time for which they have been admitted; of applicants who have been rejected; of applicants who do not respond to requests for additional information; and of applicants whose applications are not completed with respect to supporting credentials will be retained for 12 months following the requested entrance date, after which time reapplication must be made.

Transcripts and other Academic Records
Official transcripts are issued and sent by the office of the University Registrar to recognized institutions and agencies that require such documents. Transcripts can be requested at the University Registrar link above. The Graduate School maintains other academic records of graduate students during the course of their graduate study, typically for a period of 5 years thereafter.
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4.11 DEGREE REQUIREMENTS*

*The Graduate School reserves the right to change any provision or requirement at any time in order to fulfill its educational mission and exercise its educational responsibility. Refer to the website for master's and doctoral degree program checklists and the academic forms for additional information.

The general requirements for advanced degrees are set out below. Special divisional (i.e., college and school) and departmental requirements are given in the sections dealing with the respective divisions and departments. Each student must assume full responsibility for understanding both the general and special requirements of the division and department in which he or she pursues his or her major work.

4.11.1 Master's Degrees
4.11.2 Educational Specialist Degrees
4.11.3 Doctoral Degrees

4.11.1 MASTER'S DEGREES

Program Requirements
Two plans are offered for the master's degree:

Plan I. Candidates for the master's degree under Plan I must earn a minimum of 24 semester hours of credit in coursework and write a thesis (a minimum of 6 semester hours of thesis research required).

Plan II. Candidates for the master's degree under Plan II must earn a minimum of 30 semester hours of credit and complete a culminating or "capstone experience" as described under the Comprehensive Examinations section below.

Both plans require a minimum of 18 semester hours in the major subject. With the approval of the major department, the remainder of the coursework may be completed in either the major or a related field.

In some divisions and in many departments of the University, candidates are required to do their work under Plan I. Candidates working under Plan II may be required to participate successfully in seminar or problem courses that will give them an acquaintance with the methods of research and an appreciation of the place and function of original investigation in the field.

Residency Requirements
A student's program at the master's level must provide sufficient association with the resident faculty to permit individual evaluation of the student's capabilities and achievements.

Transfer of Credit
Courses of full graduate-level credit earned in a regionally accredited institution where a student was enrolled in the graduate school may be submitted for review for inclusion in a degree program. Evaluation of credit for transfer will not be made until after the student has enrolled in the Graduate School of The University of Alabama. Acceptance of credit requires the approval of the student's advisory committee and the dean of the Graduate School. Credit will not be accepted for transfer from any institution at which the student failed to achieve a "B" average on all graduate work attempted. Only courses in which a student earned a "B" grade or better may be transferred.

A student initiates in the Office of the Graduate School the request for evaluation of graduate credit obtained at another institution. It is also the student's responsibility to assure that the
Graduate School receives an official transcript of the credit concerned, well in advance of the final semester and typically before or at the time of advancement to candidacy.

With the approval of the student's department and the dean of the Graduate School, the **greater of 12 hours or 25 percent** of the required coursework for a graduate degree may be transferred from another institution. All credit toward the master's degree, including transfer credit, must have been earned during the six years (18 fall, spring, and summer semesters) immediately preceding the date on which the degree is to be awarded.

In some cases, foreign educational credentials may not meet the Graduate School's criteria for transfer of credit. It may be necessary for students in this situation to secure an evaluation of their credentials from **World Education Services Inc. (WES)**, an external foreign credential evaluation service. Additional information on their services can be found at their website.

### 400-Level Courses

A maximum of 6 semester hours of 400-level course credit **may** be accepted for a master's degree program, but only if a form for **Approval of 400-Level Course Work for Master's Credit** is approved by the Graduate School **prior to** the semester in which the 400-level coursework will be taken.

### Time Limit

All requirements for the master's degree must be completed during the **six years** (18 fall, spring, and summer semesters) immediately preceding the date on which the degree is to be awarded. There is no provision for an extension of the time limit beyond 6 years for master's students.

### Admission to Candidacy

Admission to the Graduate School does not imply admission of a student to candidacy for a degree. Admission to candidacy is contingent upon the recommendation of the student's department and the approval of the graduate dean, after the student has met the formal requirements for candidacy listed below and demonstrated sufficient preparation to pursue the graduate study and research required for the degree sought.

The application for **Admission to Candidacy** for the master's degree should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama. It **must** be approved by the time of registration for the semester in which requirements for the degree are completed. Approval will depend on (a) the quality of the applicant's graduate work prior to the time the application is made (see **Scholastic Requirements**); (b) the removal of any special conditions; and (c) the certification of the major department or school that the student is well qualified to continue work toward a degree.

### Thesis

A thesis evidencing research capacity, independent thought, and the ability to interpret materials is required of all master's degree candidates who pursue Plan I. The subject chosen must be in the major field and must be approved by the graduate committee of the major department or school and by the head of the student's major department or division.

### Article Style vs. Journal Format

**Article Style.**

At the **doctoral** level, "article-style dissertations" are unified works that include several distinct but related studies of research or creative activity, each of which is of publishable quality. The University does **not** permit an "article-style thesis" to be presented for a master's degree.

**Journal Format.**

A "journal-format thesis" is acceptable. Such a thesis follows the format of a particular journal in which the student and advisor want the thesis to be published. To prepare a journal-format thesis, the student uses the journal's "information for authors" or similarly titled guidelines in conjunction with the Graduate School's **Student Guide to Preparing Electronic Theses and Dissertations**.
A thesis committee must consist of at least three members appointed by the dean of the Graduate School. A form for Appointment or Change of Master’s Thesis Committee is used to request that the graduate dean appoint a thesis committee. The request normally is made as soon as the successful defense of the thesis proposal has been completed. All members of a thesis committee must be members of the Graduate Faculty. The Committee Chair must be a full or associate member of the Graduate Faculty. One member must be from outside the student’s major department. If the outside member is not a full or associate member of the UA Graduate Faculty (e.g., a highly qualified person from another university, a business or industry), the graduate dean needs to appoint that member by approving Temporary Graduate Faculty status for the specific purpose of serving on the student’s thesis committee. Unless there are extraordinary circumstances meriting approval by the graduate dean before the final oral defense of the thesis, all members of the thesis committee must attend the defense.

The candidate must give members of the examining committee a minimum of two weeks to read the thesis before the date of the final oral examination. A final oral examination is required of all students completing a thesis. All members of the thesis committee must be members of the UA graduate faculty and must attend the final oral examination unless there are extraordinary circumstances warranting the graduate dean's approval of the absence prior to the defense meeting.

As of August 15, 2009, all theses are submitted electronically rather than on paper. See the graduate school’s homepage for a link to information on Electronic Theses and Dissertations (ETD) for details.

Theses must comply with the regulations set out in A Student Guide to Preparing Electronic Theses and Dissertations, available on the Graduate School's website. Approval of the thesis by the graduate dean is necessary before graduation.

The thesis should be completed, if possible, while the student is in residence at the University. To request permission to complete a thesis in absentia, the student must, before leaving the University, submit a satisfactory outline of the thesis, as well as evidence that adequate facilities are available where the work will be done, to the head of the student’s major department.

Protection of Human Subjects for Research
Scientific research involving human subjects has produced substantial benefits for society, but it also can pose troubling ethical questions. The mission of the University’s Institutional Review Board (IRB) for Protection of Human Subjects is to ensure that research involving human subjects is conducted ethically. University and federal policies require that review and approval to use human subjects in research precede the research. In the case of thesis research that involves the use of human subjects in any way, the principal investigator is responsible for contacting the college Human Research Review Committee to obtain approval for the planned research.

Comprehensive Examinations
In addition to the regular course examinations, a final comprehensive examination representing a “culminating” or “capstone” experience for a degree is required of all candidates for the master’s degree (except for those candidates pursuing the master of accountancy, the master of business administration, the master of library and information studies, the master of social work, and the master of tax accounting). The comprehensive examination is a culminating experience in which the student is expected to integrate prior learning. Each department, with approval of the Graduate Council, determines the most appropriate format. The various exams may consist of one or more of the following:

- a written and/or oral examination based on the content of the degree program;
- a thesis and final oral defense;
- a course requiring interpretation and integration of information from previous courses;
- a research paper, a “policy and practice” paper, or equivalent experience;
- a public performance or exhibition along with a contextualizing paper; and/or
• a practicum or internship.

If the comprehensive exam requirement is met with option 1 and/or 2 above, then the examining committee for comprehensive examinations must consist of at least three members of the graduate faculty from that department and appointed by the dean of the Graduate School. The examination must be given at least six weeks before the date of graduation (two weeks before for Plan II) and reported promptly to the dean of the Graduate School on appropriate forms. A final report, on the Master's/EdS Examination Form is on the Graduate School website. The form should be submitted when all examinations are completed. A student may take the final oral or written examination only twice. Failing the examination twice results in dismissal from the degree program and the Graduate School.

Application for Graduation
Each candidate for a master's degree must apply for graduation through the Office of the Graduate School no later than the registration period for the semester or the first session of the summer term in which requirements for the degree are to be completed. The Application for Degree is available on the web and is required for this purpose.

Second Master's Degree
Six (6) semester hours of eligible credit from one master's degree at The University of Alabama may be applied to the requirements for a second master's degree, but only if the department of the second master's agrees to the courses in the plan of study. Any hours from the previous master's degree must have been earned during the six years (18 fall, spring, and summer semesters) immediately preceding the date on which the second degree is to be awarded.

4.11.2 EDUCATIONAL SPECIALIST DEGREES

The educational specialist degree (EdS) is offered in some departments of the College of Education that offer doctoral degrees. Students interested in the EdS degree should contact the department involved regarding availability of the degree.

The EdS degree normally is granted at the end of the sixth year of collegiate study and falls in time between the master's degree and the doctorate, although it is not viewed as intermediate between the master's and doctoral degrees. In the College of Education, some EdS degrees lead to a teaching certification for P–12 education fields. In some teaching fields, the purpose of the degree is to prepare undergraduate-college teachers, especially those who will be employed in junior colleges, small private and state colleges, and the group of colleges labeled as "developing" institutions. The primary goals of the EdS degree are teaching and acquiring professional proficiency.

Because the purposes of the EdS degree may differ from those of either the EdD or PhD, credit earned in an EdS program is not automatically transferable to a doctoral program. Instead, if a holder of an EdS degree enters a doctoral program at a later date, the doctoral advisory committee will decide how much of the credit earned in the EdS program will be counted toward the doctorate.

Program Requirements
The EdS degree requires a minimum of 30 semester hours of study beyond the master's degree. (Students completing an EdS program and also expecting to receive an Alabama Class AA certificate for service in the public schools must complete a minimum of 30 semester hours and achieve a minimum 3.25 grade point average on all work attempted.) Generally, the following requirements will hold for the degree:

• If a student enters a program with a master's degree in the same field, a minimum of 12 additional semester hours in the teaching field must be taken as part of the 30-hour total. Some departments may require more than these minimums.
• Since one of the goals of the EdS degree is to prepare undergraduate-college teachers, certain courses in higher education may be necessary, if required by the major
department. A faculty advisor in the program in higher education administration will advise students on the appropriate courses to complete this requirement.

- Candidates for the EdS degree will be required to complete all coursework at the 500 and 600 levels.

Residency Requirement
A student's program at the EdS level must provide sufficient association with the resident faculty to permit individual evaluation of the student's capabilities and achievements.

Transfer of Credit
The **greater of 9 semester hours or 25 percent** of appropriate post-master's-degree credit, earned through a regionally accredited institution approved to offer graduate programs beyond the master's level in the field of study where the credits were earned, may be transferred to apply toward an EdS degree. To be considered for transfer, credit must have been completed during the six years (18 fall, spring, and summer semesters) immediately preceding the date on which the degree is to be awarded.

Previous and appropriate post-master's-degree credit earned at The University of Alabama before a student applies for admission to the EdS program can be applied toward the EdS degree, provided it meets the program requirements of the particular department and the time limitation stated below.

Evaluation of credit for transfer will not be made until after the student has enrolled in the Graduate School of The University of Alabama. Acceptance of credit requires the approval of the student's advisory committee and the dean of the Graduate School. Credit will not be accepted for transfer from any institution at which the student failed to achieve a "B" average on all graduate work attempted. Only courses in which a student earned a "B" grade or better may be transferred.

A student in his or her last semester of work toward the master's degree who does not need a full course load to complete the course requirements of his or her master's program may register for work toward the EdS degree, in the amount needed to complete full registration loads.

In some cases, foreign educational credentials may not meet the Graduate School's criteria for transfer of credit. It may be necessary for students in this situation to secure a credentials evaluation from **World Education Services Inc. (WES)**, an external foreign credential evaluation service.

Time Limit
All requirements for the EdS degree must be completed during the **six years** (18 fall, spring, and summer semesters) immediately preceding the date on which the degree is to be awarded. There is no provision at the EdS level for a time limit extension beyond 6 years.

Plan of Study
A standard form for an EdS plan of study is not available at the Graduate School's website, because each department or program participating in the EdS degree has established a framework of requirements for the degree that indicates the general structure of its program. At or before initial registration, each student develops a formal plan of study for the degree, designating all courses he or she plans to take in the program. In reaching decisions, the student should consult with the program director. The student will file a completed plan with the program director who, upon approving the plan, will distribute copies to the Graduate School and to the student, retaining one copy for departmental files.

A plan of study may be amended at any time using appropriate forms and following the procedure described above. Until formal approval of an amended plan of study is made, the original or current modification of the plan will be in effect.

Admission to Candidacy
As noted above, the EdS Plan of Study is available in the College of Education and must be approved by the Graduate School before the student can be admitted to candidacy for the
EdS degree. Thus, it is best to complete the plan of study by the end of the first or second semester of course work.

Each EdS student completes the Admission to Candidacy for the EdS Degree application form and submits it to the Graduate School.

**Examinations**

In addition to the regular course examinations, a final comprehensive examination is required. The examination may be written or oral or both, at the discretion of the major department. No candidate is eligible for the final examination until approved by the appropriate program director. **A student may take the final oral or written examination only twice. Failing the examination twice results in dismissal from the degree program and the Graduate School.**

The examination will be prepared and conducted by a committee of at least three members of the UA graduate faculty, including the program director in the major area of study and a designee (or two or more people from the major area of study, designated by the program director) and the program director (or a designee) from the minor field of study, if one has been included in a program. Committees will be appointed by the dean of the Graduate School on request of the major program director. Each candidate must be judged by the major department to have completed the examination(s) satisfactorily.

If a candidate receives failing marks in both the minor area of study and the professional education field, the candidate will be judged to have failed the examination. If a candidate fails either the minor examination or the professional education examination, the committee as a whole will reach a decision about the satisfactory or unsatisfactory nature of the candidate's performance on the examination. If a candidate does not have a minor field, the committee members will meet to reach a decision in the event the student fails the professional education examination.

All written examinations will be kept on file by the program directors for one year following the date of the examination, and students will have the right to confer with their program directors regarding the strengths and weaknesses shown on the examinations.

**Application for Graduation**

Each candidate for an educational specialist degree submits the Application for Degree through the Graduate School no later than the registration period of the semester or the first term of the summer session in which requirements for the degree are to be completed.

**4.11.3 DOCTORAL DEGREES**

The University offers several types of doctorates, each of which is described below. The doctor of philosophy (PhD) degree is regarded as the researcher's degree. Program requirements include the acquisition of special skills for conducting independent, scholarly research of publishable quality. Requirements traditionally include a working knowledge of one or more foreign languages, but currently a number of foreign-language alternatives have been approved by departments. Through acquisition of these skills, PhD candidates demonstrate their potential for careers as independent, publishing scholars. Refer to departmental sections of this Catalog for details on foreign-language requirements or alternatives.

The minimum period in which a doctoral degree can be earned is 3 full academic years of graduate study after completion of a baccalaureate degree, although in most disciplines the period is longer. Graduate teaching assistants (GTA) or graduate research assistants (GRA) whose work assignments are 10 hours per week (i.e. the equivalent of 3 semester hours) or more should expect to take more than the minimum period of 3 academic years to earn a doctoral degree. The only exception to the 3-year minimum is the practice-focused DNP.

**Doctor of Philosophy Degree**
The doctor of philosophy degree is granted on the basis of scholarly proficiency, distinctive achievement in a special field, and capacity for independent, original investigation. The first two criteria are tested in coursework and a comprehensive examination, the last in a dissertation in which the student must present clearly and effectively the results of substantial research. A combination of these accomplishments, rather than the mere accumulation of residence and course credits, is the essential consideration in awarding the PhD degree. The PhD differs from the EdD in a number of ways, including the fact that the PhD Plan of Study and comprehensive examination demonstrate a higher-level research focus, and there is a greater number of dissertation hours and higher level of complexity and independent thought in a PhD-level dissertation.

Field of specialization
A defined field of specialization is required of all candidates for the doctor of philosophy degree. A minimum of 48 semester hours of non-dissertation course credit is required. Candidates should consult their departments or the appropriate section of this Catalog for additional requirements. The doctoral course as a whole must be unified, and all its parts must contribute to an organized program of study and research. In addition, a student must complete a minimum of 24 hours of dissertation research.

Research skill/language requirements
There is no University-wide foreign language/research skill requirement for doctoral students; each college or department offering the PhD degree may set its own requirements. This policy reaffirms the importance of research skills and foreign languages in the highest academic degree granted by American universities, but it also recognizes that the departments offering the degrees are in the best position to determine the number and nature of such requirements in the interests of their students. For further information about PhD foreign language/research skill requirements, students may contact their departments or the Graduate School office (205-348-5921).

Interdisciplinary Studies
There is a PhD degree program in interdisciplinary studies, and it is administered by the Graduate School. In addition to the general requirements for the PhD degree, the program of study and the supervisory committee for the prospective interdisciplinary studies degree candidate must be approved by the dean of the Graduate School before the student is admitted to the program. See Interdisciplinary Studies (IDS) at the Graduate School's website for information on prerequisites, admission procedures, course of study and other aspects of IDS programs.

Doctor of Education Degree
A minimum of two years of graduate study beyond the master's degree is required for the completion of the EdD program. The student is required to complete 60 semester hours in approved graduate courses beyond the master's degree, or 90 semester hours of approved graduate courses, and to defend a dissertation. The student must complete a minimum of 12 hours of dissertation research. In the College of Education section of the Graduate Catalog, there are specific regulations governing the EdD program.

Doctor of Musical Arts Degree
The DMA. degree requires a minimum of 48 semester hours beyond the master of music degree, plus recitals and other examinations as determined by faculty of the School of Music. Specific requirements for each major area are outlined in the School of Music section of the Graduate Catalog.

Doctor of Nursing Practice
The Doctor of Nursing Practice (DNP) is a joint program offered by the University of Alabama in Huntsville College of Nursing (UAHCON), the University of Alabama at Birmingham School of Nursing (UABSON), and The University of Alabama Capstone College of Nursing (UACCN). The DNP is a practice-focused degree that is detailed in the Nursing section of this Catalog.
**Admission to Doctoral Degree Programs**

Admission to any doctoral program is limited to students whose scholastic records show distinct promise of success in doctoral study. Admission to the Graduate School and the earning of a master's degree from The University of Alabama do not guarantee acceptance into a doctoral program. A student obtaining the master's degree at the University must submit to the dean of the Graduate School written permission from the department head or division dean to be eligible to work toward the doctoral degree. Students in doubt about their acceptance into doctoral programs should consult with departmental advisors and the Graduate School, which makes the final decision about admission. A department may terminate a student's doctoral admission if there is documented unsatisfactory academic or other progress toward completion of the degree.

**Residency Requirements**

The intent of the residency requirement is to ensure that doctoral students contribute to and benefit from the complete spectrum of educational, professional, and enrichment opportunities provided at The University of Alabama. Though not all-inclusive, the list below shows some of the primary reasons why best practices in U.S. graduate education and the graduate faculty on the UA Graduate Council have determined that a substantial residency experience must be included in a doctoral program:

- provide significant interaction between the student and the various UA graduate faculty in the student's discipline;
- provide ample opportunities for student exposure to and engagement with cognate disciplines and research scholars working in those disciplines;
- provide significant opportunities for face-to-face peer interaction between and among graduate students in the student's discipline and in other disciplines; and
- provide the opportunity for a mentor-apprentice relationship between the student and graduate faculty, as well as adequate time for in-depth and direct faculty evaluation of the student.

There are two possible methods for meeting doctoral residency. The *traditional* method is the method of choice by the majority of UA departments. There also is an *alternative* method available, but only for doctoral students in specific departments or programs that have submitted a proposal for an alternative and had the faculty of the Graduate Council evaluate and approve the alternative. (Those departments and programs are in a bulleted list in the last paragraph of this section of the Catalog).

**Traditional Doctoral Residency**

The residency requirement is that the student must spend an **academic year in continuous residence on the campus of The University of Alabama as a full-time student in the Graduate School**. Any one of the following 4 methods can be used to meet traditional residency:

- a full-time fall semester plus full-time enrollment the next spring;
- a full-time summer (consisting of 9 or more graduate hours in the 13 weeks from Interim through the end of Summer II) plus the following full-time fall semester;
- a full-time spring semester plus the next full-time summer semester as defined above; or
- a full-time spring semester plus the following full-time fall semester.

To meet this requirement, only graduate-level, non-dissertation coursework can be applied. Dissertation or thesis research cannot be used. The Graduate Council, consisting of representatives of the UA graduate faculty, has established a policy that distance learning courses delivered online or by any other distance learning format may not be used to satisfy the traditional doctoral residency requirement.

As mentioned earlier, the majority of UA departments follow traditional residency as described above and do not permit any distance learning hours to be used to meet residency.

**Alternative Doctoral Residency**
For many years there has been an alternative for EdD students at the Gadsden Center. See the College of Education section of this Catalog for details.

For other doctoral students, in 2008 the Graduate School worked closely with the Graduate Council so that a department could apply for approval of an Alternative Doctoral Residency (ADR) option for its doctoral students. There is a brief format (available from the Graduate School) for departments to follow in proposing an ADR option. It includes such things as demonstrating that the proposed ADR will assure that ADR doctoral students meet 5 "value constructs" that underpin doctoral education.

When a department or program receives Graduate Council approval to offer an ADR, the ADR provides a second possible way for students in that department or program to meet the residency requirement. The approved ADR does not replace the traditional residency option, which is still available to students who choose it. Whether the student meets doctoral residency through the traditional method or an approved ADR method, dissertation (699) hours may not be used; only non-dissertation graduate hours may be used.

In the specific departments or programs that have received Graduate Council approval to offer an ADR, students choosing the ADR option may be able to include up to a certain number of distance learning hours. The specific number is what was approved in the ADR proposal for that particular department. Contact the department for details. The following have been approved to offer an ADR:

- PhD in Counselor Education
- PhD in Aerospace Engineering and Mechanics
- PhD in Curriculum and Instruction
- PhD in Human Performance
- PhD in Instructional Leadership
- Ph.D. in Instructional Leadership with a Concentration in Social and Cultural Studies in Education
- Ph.D. in Instructional Leadership with a Concentration in Instructional Technology

Transfer of Credit
Acceptable graduate credit, earned in a regionally accredited institution in which the student was enrolled in that institution's graduate school, may be transferred and applied to the requirements for a doctoral degree if approved by the department and the Graduate School. Only credit that was earned during the six-year period (18 fall, spring, and summer semesters) preceding admission to the doctoral program may be considered for transfer. Revalidation (recertification) of credits more than 18 semesters old at the time of admission to a doctoral program is not an option.

Consideration of credit does not guarantee its transfer. Evaluation of credit for transfer will not be made until after the student has enrolled in the Graduate School of The University of Alabama. Credit will not be accepted from any institution at which the student failed to achieve an overall "B" average on all graduate work attempted. Only courses in which a student earned a "B" grade or better may be transferred.

A student completes a Request for Transfer of Graduate Credit and submits it to the Graduate School. The student also must ensure that the Graduate School has an official (not faxed or copied) transcript of the credit involved. Students should be aware that planning to transfer a course in the final semester typically will delay commencement by a semester if the UA graduate registrar does not receive official notice of completion of the course by at least 3-4 weeks prior to commencement. It is best to apply for official transfer of credit in the student's first semester of doctoral enrollment; otherwise, the student and advisor will be unsure about the number of course hours needed when submitting the required Plan of Study.

With the approval of the student's department and the dean of the Graduate School, up to one-half of the required coursework (exclusive of dissertation research hours) for a doctoral degree may be transferred from another institution if approved by the department
and the graduate school. Please note that some departments allow fewer than 24 hours of transfer credit, so be sure to check with your department’s graduate coordinator regarding your department’s transfer policy.

In some cases, foreign educational credentials may not meet the Graduate School's criteria for transfer of credit. It may be necessary for students in this situation to secure an evaluation of their credentials from World Education Services Inc. (WES), an external foreign credential evaluation service.

Time Limits
All requirements for the doctoral degree must be completed within seven years (21 fall, spring, and summer semesters) following admission to the doctoral program, with the following specific exceptions approved by the Graduate Council: psychology, modern languages and classics, English and political science (eight years if entering the doctoral program with a baccalaureate, not master's, degree), and eight years from the time of first registration in PhD courses for students dually enrolled in the PhD program in political science and the JD program.

Previous graduate credit may be applied to the doctoral degree if the credit was earned during the six-year period (not seven years) prior to admission to the doctoral program. Such credit must be identified clearly on the Outline of PhD Program (Plan of Study) and requires Graduate School approval. Only those students graduating within the time limit for their doctoral program may apply previous graduate credit to the doctoral degree if the credit was earned during the six-year period prior to admission to the doctoral program.

Time Limits Extension Request
Only under compelling circumstances beyond the student's control a student may petition for a one-semester extension to the seven-year time limit (or eight-year time limit for the selected programs noted above). The Graduate Council approved the following steps to request an extension:

- To begin the process, the student petitions the department head. In the petition the student (a) describes the compelling circumstances, (b) briefly describes the current status of the dissertation, then (c) includes a timeline showing each important remaining step in the completion of the dissertation. The last step and date in the timeline are submission of the successfully defended dissertation on or before the published final date for submission of dissertations for the requested extension semester.
- If the department head supports the petition, it is forwarded to the college dean.
- If the college dean supports the petition, it is sent to the graduate dean.
  - If the graduate dean or his designee approves the extension, it will not require the student to validate any out-of-date UA or transfer courses previously approved for the plan of study.

If a student fails to complete all degree requirements within the time limit for the student's doctoral program or within a one-semester extension approved as noted above, the student will be dropped (suspended) from the doctoral program. To complete a doctoral degree, the student would have to reapply for admission and be admitted by the department and Graduate School. Graduate Council policies do not provide the option to revalidate either UA or transfer courses completed more than six years prior to the date of admission. Thus, a readmitted student would be able to apply to the new admission only those courses approved by the department and Graduate School and completed within the 6 years (18 fall, spring, and summer semesters) prior to the new admission.

Repeating Courses When Given an Extension
When requests are made for extensions of the doctoral time limits, and it is deemed that an out-of-date course is integral to the degree program, the college dean may request permission of the Graduate School for such a course to be repeated. In this case, both grades are used in calculation of the GPA.

Plan of Study

http://graduate.ua.edu/catalog/14800.html
Early in the graduate program, each student must confer with the appropriate departmental adviser or major professor to select courses, discuss when and by which method the doctoral residency requirement will be completed, discuss research interests, and so forth. Then a Plan of Study must be prepared and submitted to the Graduate School.

The PhD Plan of Study and DMA Plan of Study are available at the Graduate School website. The Plan of Study for other doctoral programs (EdD, DMA, etc.) are available from the student's department, college or school. All doctoral students must have a completed Plan of Study approved by the Graduate School no later than the semester during which the student will complete 30 semester hours of UA and/or transfer credit toward the doctoral degree. Otherwise, a “hold” may be placed on future registrations.

An amended Plan of Study (if needed) must be submitted to the Graduate School when the student submits the form for Admission to Candidacy for Doctoral Degree.

Preliminary or Comprehensive Examination
A preliminary or comprehensive qualifying examination is required of all doctoral candidates. This examination is given after

- any foreign language/research skill requirements are met (PhD students only);
- two full years of graduate study are completed; and
- the supervisory committee deems the student to have adequate preparation in the major and minor fields of study.

The examination is conducted by the student's supervisory committee or other committee established in the program area. Whereas one of the purposes of the preliminary examination is to determine the student's research competence to begin work on a dissertation, the examination should be completed at least nine months before the degree is to be awarded. A student may take the final oral or written examination only twice. Failing the examination twice results in dismissal from the degree program and the Graduate School.

Admission to Candidacy
The requirements for advancing to candidacy include passing the qualifying (major or preliminary) examination; receiving departmental approval of the dissertation subject (although some departments require the defense of a dissertation proposal and/or writing one or more preliminary sections of the dissertation as well); and having the committee recommend the student for Admission to Candidacy for the Doctoral Degree. The completed candidacy form is submitted to the Graduate School.

Continuous Dissertation or Document Registration
Once a student has met the requirements for admission to candidacy, received approval for the dissertation research proposal, or initiated enrollment in 699 (dissertation research for a doctoral degree), the student must pursue completion of the dissertation without interruption by enrolling each fall and spring semester of the academic year for at least 3 hours of dissertation research. Summer enrollment for 699 Dissertation Research is expected if the student is working on the dissertation and using any University facilities or resources, including faculty time, but the only time summer registration is required for dissertation research (3 hours minimum) is when a doctoral student is graduating in August or defending the dissertation during the summer semester. This is true whether or not the student has submitted an Application for Admission to Candidacy.

Each PhD student must have completed a minimum of 24 hours of such dissertation work upon completion of the degree. The amount of dissertation research for which a student enrolls in any given semester should be commensurate with the progress a student is expected to make on the dissertation, as well as reflective of the extent to which University facilities and faculty time are invested in the proposed activities.

Dissertation
A dissertation showing the ability to conduct independent research and skill in organization, writing and presentation must be prepared on a topic in the major field. It must constitute an
original contribution to knowledge. The subject of the dissertation must be approved by the dissertation committee of the major department or division and by the dean of the Graduate School.

A dissertation committee, with the director of the dissertation as its chairperson, supervises the preparation of the dissertation. The committee shall have not fewer than five members, all of whom are appointed by the dean of the Graduate School. The graduate dean’s approval of the proposed dissertation committee is expected to be obtained before significant progress is made on the dissertation—typically just before or just after the dissertation proposal meeting. For this purpose, the student submits the form for **Appointment/Change of a Doctoral Dissertation Committee.**

All members of a dissertation committee must be members of the UA Graduate Faculty. The committee chair must be a full member of the Graduate Faculty, as described in the Catalog’s section on **Qualifications of the Graduate Faculty.** One member must be from outside the student’s major department. If the outside member is not a full or associate member of the UA Graduate Faculty (e.g., a highly qualified person from another university, a business or industry), the graduate dean needs to appoint that member by approving Temporary Graduate Faculty status for the specific purpose of serving on the student’s dissertation committee. Unless there are extraordinary circumstances meriting approval by the graduate dean before the final oral defense of the dissertation, all members of the dissertation committee must attend the defense of the dissertation.

The dissertation must comply with the regulations in **A Student Guide to Preparing Electronic Theses and Dissertations.** Graduate School deadlines, including each semester’s dissertation deadline, are available at the **Graduate School’s homepage.**

Consult the **ETD website** for details of ETD submission, including information on what needs to be submitted to the Graduate School. The graduate dean must approve the dissertation before the student can be cleared for graduation.

The Catalog section on **Continuous Dissertation Registration for Doctoral Students** states that once a student qualifies for doctoral candidacy, the student must enroll each semester for at least 3 hours of dissertation (699) research. If certain conditions are met for the student’s final semester, however, the student may qualify to enroll for fewer than 3 hours of 699 dissertation research, but only in that final semester. (see table below)

<table>
<thead>
<tr>
<th>Final-Semester Dissertation (699) Minimum Registration Hours</th>
<th>Minimum hours of 699 registration required in the final semester</th>
</tr>
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<tbody>
<tr>
<td>When was the *completed electronic dissertation submitted to ProQuest/the Graduate School?</td>
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<tr>
<td>By 4:45 p.m. on the last-possible day for instructors to post grades for the semester before the student’s final semester (date published in the **University Academic Calendar)</td>
<td>0</td>
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<tr>
<td>After 4:45 p.m. on the last-possible day for instructors to post grades for the semester before the student’s final semester, but before 4:45 p.m. on the last-possible day to register or add a course for the student’s final semester (both dates published in the **University Academic Calendar)</td>
<td>1</td>
</tr>
<tr>
<td>After 4:45 p.m. on the last-possible day to register or add a course for the student’s final semester (date published in the **University Academic Calendar)</td>
<td>3</td>
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</table>

*A "completed" dissertation for submission purposes is one that has been successfully defended, signed by all committee members and the department chairperson, and carefully edited with electronic file(s) being approved by the*
dissertation advisor before being submitted electronically. All three conditions must be met to be considered “completed.”

Additionally, students must be sure to submit the Committee Acceptance Form (original copy with signatures) to the Graduate School and complete the online NORC Survey of Earned Doctorate. NOTE: It is the date of ProQuest submission that determines the final-semester registration requirement.

**The University Calendar is available at the Academics tab of the website of the University Registrar.

**Article-Style Dissertations**  
This approach is intended for doctoral students whose dissertation will consist of a number of related manuscripts or articles, representing independent research or creative activity. It is an option available only to students in certain fields. A complete list of these fields is below:

<table>
<thead>
<tr>
<th>Accountancy</th>
<th>Finance</th>
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</thead>
<tbody>
<tr>
<td>Aerospace Engineering and Mechanics</td>
<td>Geological Sciences</td>
</tr>
<tr>
<td>Applied Statistics</td>
<td>Health Education and Promotion</td>
</tr>
<tr>
<td>Biological Sciences</td>
<td>Management</td>
</tr>
<tr>
<td>Chemical Engineering</td>
<td>Management Science</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Marketing</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>Mechanical Engineering</td>
</tr>
<tr>
<td>Computer Science</td>
<td>Metallurgical and Materials</td>
</tr>
<tr>
<td>Economics</td>
<td>Engineering</td>
</tr>
<tr>
<td>Education (all departments)</td>
<td>Physics</td>
</tr>
<tr>
<td>Electrical and Computer Engineering</td>
<td>Psychology</td>
</tr>
</tbody>
</table>

Article-style dissertations must be based upon research completed while the student is enrolled at The University of Alabama. For each article used, the student must be the first author, or equivalent, as defined by the discipline. As with traditional dissertations, the article-style dissertation must be the student's original idea. It must be a unified work and include a sequence of articles of publishable quality around a cohesive theme, with a comprehensive review of literature demonstrating an in-depth understanding of the unifying framework.

- In article-style dissertations there will be introductory material to describe the studies, show how they are related, and explain their significance;
- connecting language to bridge each study to the next; and
- a summary making clear the importance of the studies, integrating the major findings, and discussing the implications for the overall topic.

These components do not have to be separate sections or chapters. They may be parts of the manuscripts or may be accomplished in an abstract.

All parts of both traditional and article-style dissertations must conform to the provisions set forth in A Student Guide to Preparing Electronic Theses and Dissertations, except when the circumstances of a specific project or discipline’s style manual require deviation. Students considering the article-style approach should contact the Graduate School before beginning their work if they have questions concerning specific problems or deviations from traditional procedure.

All doctoral candidates must give members of the dissertation committee a minimum of two weeks to read the dissertation before the date of the required final oral examination.

**Electronic submission of dissertations:** August 15, 2009, is the date when electronic submission began to be required and paper submission no longer was accepted. Consult the ETD website for details of ETD submission, including information on what needs to be submitted to the Graduate School. The graduate dean must approve the dissertation before the student can be cleared for graduation.
Protection of Human Subjects for Research
Scientific research involving human subjects has produced substantial benefits for society, but it also has significant ethical questions. The mission of the University's Institutional Review Board (IRB) for Protection of Human Subjects is to ensure that research involving human subjects is conducted ethically. University and federal policies require that review and approval to use human subjects in research precede the research, no matter how great or small the involvement of the human subjects. In the case of dissertation research that involves the use of human subjects, the principal investigator is responsible for contacting the college Human Research Review Committee to obtain approval for the planned research. The University's IRB approval form is available at the IRB website.

Final Examinations
When the dissertation has been completed, the candidate will be given a final oral examination by a committee of not fewer than five members, one of whom must be from outside the student's major department or, for students in the College of Education, outside the student's area (not program), and appointed by the dean of the Graduate School. This examination will focus primarily on the candidate's research work, as embodied in the dissertation, and the field in which the dissertation lies, but it may encompass the complete program for the degree. The results of the examination must be reported to the Office of the Graduate School at least six weeks before the commencement at which the degree is to be conferred.

Application for Graduation
Each candidate for a doctoral degree must apply for the degree through the Office of the Graduate School no later than the "last day to register or add a course" of the semester or the first term of the summer session in which requirements for the degree are to be completed. That day is published for each semester at the website of the University Registrar. To apply for graduation, the student submits an Application for Degree to the Graduate School.

Clearing the Academic Record for Commencement
At least one week before commencement, the candidate's record must have been cleared for graduation.

Attendance at Commencement
A candidate for a doctoral degree must be present at a scheduled commencement to receive the diploma and hood, unless excused by the graduate dean.

Withholding or Withdrawing an Advanced Degree
The University of Alabama reserves the right to withhold or withdraw an advanced degree on the recommendation of the graduate faculty.
4.12 JOINT, COOPERATIVE, AND SHARED GRADUATE PROGRAMS

To utilize more effectively the educational resources of the state and to prevent excessive duplication of graduate programs, The University of Alabama, the University of Alabama at Birmingham, and the University of Alabama in Huntsville have agreed to the establishment of several joint, cooperative, and shared graduate programs. (These three terms are defined by the Alabama Commission on Higher Education). Inquiries regarding these types of programs available at The University of Alabama should be directed to specific departments and to the admissions staff of the Graduate School of The University of Alabama.
5.1 COURSE-NUMBERING SYSTEM

Courses numbered 400–499 are primarily for advanced undergraduate students. Courses numbered 500–599 are primarily at the master's level. Courses numbered 600–699 are primarily at the doctoral level.

As noted in the section on “400-Level Courses for Master’s Credit,” a maximum of 6 semester hours of 400-level course credit may be accepted for a master's degree program if approval has been obtained from the department and the Graduate School in the semester prior to taking the 400-level coursework.

Cross-listed courses are those with numbers connected by a colon (e.g. EN 533:534). Credit for cross-listed courses is given separately for each semester. In some cases, credit is given for the first semester separately, but not for the second semester unless the first semester has been completed previously.

Slash-listed courses (e.g. COM 415/515) are courses for which credit is given separately for undergraduate vs. graduate students. The syllabi for such courses are required to specify the higher quality and greater quantity of work that must be produced by graduate students to receive graduate credit. Such quality and quantity are described in this Catalog's section on "400-Level Courses for Master's Credit“ and on page 3 of the Course Inventory Form.

Unless otherwise indicated, all statements of numbers of hours included in the course descriptions refer to semester hours of credit. In the case of courses connected by a colon, the credit indicated is for each semester.
6.1 DEPARTMENT OF AMERICAN STUDIES (AMS)
Chairperson: Professor Lynne Adrian, Office: 101 ten Hoor Hall

The master of arts program in American Studies is designed to enable students to study American culture from a broad, interdisciplinary perspective, combining basic cultural studies with advanced professional training. Drawing upon the graduate resources of the University at large, students develop individually tailored programs of coursework that reflect their own special interests. Students may pursue an academic track or a professional track. Our graduates have used the MA in American Studies as preparation for positions in journalism, public relations, library service, historical preservation, community organizing, private foundations, law, and education.

Admission Requirements
A student interested in pursuing a master's degree in American Studies must first apply for admission to the Graduate School and satisfy the school's minimum requirements as stated in this catalog. Each applicant should submit an acceptable score on either the general test of the Graduate Record Examination or the Miller Analogies Test in support of his or her application.

The dean of the Graduate School will then forward the student's records and application to the Department of American Studies for evaluation. Although a basic undergraduate background in American culture (literature, history, and political thought) is preferable, it is not a prerequisite for admission to the program. Students given conditional admission to American Studies must earn a 3.0 in their first semester of coursework or they will be dropped from the M.A. program.

See the Admission Criteria section of this catalog for more information.

General Degree Requirements
Students should refer to the Graduate Handbook of the Department of American Studies for additional information.

Plan I. The student earns a minimum of 24 semester hours of credit in coursework and completes a thesis. A minimum of 6 semester hours thesis research is required.

Plan II. The student earns a minimum of 30 semester hours of credit in coursework.

Under either plan, the student's program must include the following 20 hours of American Studies courses: AMS 585, AMS 586, AMS 595, AMS 596, AMS 597, and 6 hours of seminars. A student may take up to 9 hours outside the department, choosing a single disciplinary or cognate area (literature, history, broadcast and film, women's studies, journalism, the South, etc.) or two minor areas. Most students, however, choose a focus within American Studies.

Comprehensive Examinations
Under either Plan I or Plan II, each candidate for the master of arts degree in American Studies will write a comprehensive examination designed to reflect the individual's program. The comprehensive examination is intended as an integrating, synthesizing experience that enables the student to draw together the various component areas of his or her course of study. The results of the examination should attest to the student's acquisition of an interdisciplinary perspective, as well as an understanding of American culture as a whole. See the American Studies Graduate Handbook for details on the comprehensive examinations.
Additional information on master's degree requirements is in the [Degree Requirements](http://graduate.ua.edu/catalog/15100.html) section of this catalog.

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### Course Descriptions

**AMS 500 Internship.** Three hours. Pass/fail.
An internship opportunity that combines independent study and practical field work focusing on a particular problem or topic related to American culture and experience. Recent examples include internships in museum management, historic preservation, archaeological research, television production, category fiction, promotion of academic programs, documentary television, academic public relations, with Alabama Heritage and Louisville magazines, and with the Paul Bryant Museum.

**AMS 501 African-American Experience.** Three hours.
An investigation of the influence of Africa and the people of African descent on the development of American cultural experience, from the emergence of the Atlantic world and the slave trade to the freedom struggles of the late 20th century. The course will explore insights from various disciplines and examine several kinds of cultural artifacts (for example, music such as gospel, blues, jazz, and hip hop; the written and spoken word; sculpture, painting, and photography; the built environment in rural and urban contexts; religious and political economic ideas and phenomena) as well as engage canonical and cutting-edge works of cultural scholarship related to Africans in the Americas. Topics covered include the establishment of plantation societies and racialized chattel enslavement; the creation of African-American culture within the USA; Afro-centricity and the theory of African-Americans as Omni-American; the South as black national territory; and late capitalist challenges to black identity. Offered spring semester.

**AMS 502 Special Topics in African-American Studies.** Three hours.
Research and discussion of selected African-American topics.

**AMS 505:506 Directed Study.** One to three hours each semester.
Prerequisite: Sponsorship by a faculty member.

**AMS 512 On the Road After 1950.** Three hours.
This course seeks to introduce the breadth and power of the travel culture that defines "America" and to examining enduring features when writers take to the open road in America.

**AMS 515 Service Learning in the Immigrant Community-Latinos.** Three hours.
This course will examine the immigrant journey and immigrant life in the American South. Through Lectures, class discussions, readings, films, outside speakers, and a community-based service learning project, the course will help students better understand the historical and contemporary issues that confront immigrants and their receiving communities. Students will interact with members of local immigrant communities by being placed with appropriate organizations or agencies that assist immigrants in the community. In addition to a final course paper based on their service learning experience, students will maintain a class journal.

**AMS 521 Writer and Artist in America.** Three hours.
Literary and visual artists practice their crafts for a wide range of reasons, but some of the most interesting work in 20th century U.S. arts & letters emerged in response to perceived social crises and challenges to American cultural values. Specifically, in this class we will consider artistic responses to sex in the early 20th century American city, the working class during the Great Depression, the challenges of artistic rebellion during the Cold War, the ethical dilemmas of the Vietnam War, the perils of the AIDS/HIV crisis, and the flourishing of contemporary consumer culture. Placing the work of selected writers and artists in a comparative framework, we will examine how these experiences of crisis and transition have given rise to particular kinds of cultural work and, by the same token, how works of cultural expression can shed light on the defining features of twentieth century American experiences. In the process, the course also will introduce you to several important movements in
twentieth century American literature and visual art, including Naturalism, Modernism, Social Realism, the Beat movement, and Postmodernism.

AMS 522 Popular Culture in America. Three hours. This course offers a selective survey and analysis of 20th century U.S. popular culture: more specifically, comic books, fan culture, television, music, advertising, and sports. By placing these materials within a social history context, the course will examine ways in which popular culture has reflected and shaped aspects of American society such as gender, race, class, and regional identity.

AMS 529 America Between the Wars. Three hours. Explores the first two decades of America's "Modern Times" (1919-41), when Americans redefined themselves and their society, embracing and debating (sometimes hotly) old beliefs, new conceptions, and the implications of a machine-driven, modern-mass society.

AMS 530 Special Topics. One to three hours. Selected American topics in American Studies offered by AMS faculty members or Americanists from related departments. Recent example: Women in America.

AMS 531 Studies in Popular Culture. Three hours. Research and discussion of selected topics in American popular culture: literature, music, network broadcasting, advertising, film, and drama.

AMS 532 Studies in the Arts. Three hours. Research and discussion of selected topics in literature, film, painting, photography, and architecture, and the role of the artist in 19th- and 20th-century America.

AMS 533 Studies in American Thought. Three hours. Research and discussion of selected topics in American intellectual history: the law, nature and the city, religion and the state, liberalism and conservatism, Utopianism, and science and society.

AMS 534 Studies in the South. Three hours. Research and discussion of selected topics in Southern culture: ethnicity, regional consciousness, women in the South, and change and continuity.

AMS 535 Studies in Ethnicity, Class, and Gender. Three hours. Research and discussion of selected topics in ethnicity, class, and gender in America.

AMS 536 Studies in Social Experience. Three hours. Research and discussion of selected topics in the American social experience.

AMS 537 Studies in the West. Three hours. Research and discussion of selected topics in the American West as period, place, experience, and imagination: discovery and exploration; physical and cultural transformation; and value, ethic, and ideal.


AMS 540 Sexuality and Culture. Three hours. This course examines sexuality as a category of historical and cultural analysis. With an interdisciplinary focus on representation in film, science, visual culture, literature, and politics, we will investigate how sexual categories and identities are produced and contested over time. The course emphasizes the complex intersection of sexuality with race, gender, class, and region to reveal the deep linkages among them as locations of power, oppression, and resistance. Students will become familiar with a range of theoretical and methodological approaches to the study of sexuality, including cultural studies, history, and critical theory.

AMS 545 The “Good War”. Three Hours.
Examination of selected topics from the American experience during the Second World War. Topics include the Homefront, the Holocaust, race relations, the emergence of American air power, and the impact of the war on American memory and postwar American society.

**AMS 550 Women in America.** Three hours.
A lecture/discussion course on the role of women in American culture which concentrates on the major social and cultural contributions of women from all backgrounds and walks of life. Key questions involve the historic role of women in America and how their status reflects the structure of society as a whole. Most of the readings focus on the twentieth century and the relationships between individual women and the cultural networks in which they participate and help create.

**AMS 560 Race and Ethnicity in US Labor.** Three hours.
This course is designed to familiarize students with the important topics, themes and methodologies in the study of race and ethnicity in U.S. labor. Throughout the semester, we will examine the lives of working women and men and their roles in the social, political, and economic development of the United States. We will analyze the role of gender, race, and ethnicity at home and in the workplace and examine how scholars have studied the people, events and institutions in this field.

**AMS 565 Fictions of American Identity.** Three hours.
An examination of American literature and culture from before the Civil War until after the Civil Rights Movement. Representations of American experience in essays, novels, poems, short stories, social reformist tracts, and the visual arts will be studied in the context of social and political debates over slavery, national identity, women's roles, immigration and assimilation, social mobility, urbanization, sexual mores, consumer culture, and race relations.

**AMS 570 Native-White Relations to 1830.** Three hours.
This course covers the broad range of Native American experiences from first contacts with European explorers to the beginnings of Indian removal policies in 1830. We will particularly focus on the complex and intertwined relationships between Native Americans and white peoples: how each challenged, adapted to, and retreated from the other. The class will assess: colonial encounters among Native Americans, Spanish, French, and English; the meanings of white captives among the Indians; crossing over into different cultures and transforming identities in the new nation; and the impact of forced removal of Indians. Because of the interdisciplinary nature of American Studies, this course will evaluate various cultural artifacts, including autobiographies, histories, origin myths, poetry, political statements, as well as visual images (paintings, engravings, films).

**AMS 576 Constructing the American Revolution, 1776-1865.** Three hours.
From the Declaration of Independence to the Civil War, Americans have continually tried to provide narrative shape and cultural significance to their national origins. Through the analysis of primary and secondary sources (political tracts, art works, histories, biographies, fiction, and other artifacts), this course will explore the relationship between the eighteenth-century revolutionaries' and their nineteenth-century heirs' cultural construction of the Revolution. Simply put, this course is about how people in the past have thought about their own past.

**AMS 580 Democracy in America.** Three hours.
Throughout the first half of the nineteenth century, Americans prided themselves on their democratic politics, industrial progress, science and technology, religious faiths, capitalist tendencies, and control over nature. No other person captured the essence of American society and manners more than the French aristocrat, Alexis de Tocqueville, who traveled to the United States in the 1830s and published his famous work, Democracy in America. Using Tocqueville's observations as well as fiction, autobiography, painting, politics, and more, this course explores how ordinary Americans presented themselves as a democratic people from 1800 to 1865.

**AMS 585 American Experience, 1620–1865.** Three hours.
An exploration of the formative years of the American cultural experience, from early
European encounters with the New World to the attainment of continental nationhood. The course will draw upon insights from many disciplines and will include several kinds of cultural evidence (for example: literature, art, and photography; religious, political, and social thought and behavior; and economic, technological, and geographical development) as well as consideration of recent major synthetic works of cultural scholarship. Topics covered include the growth of colonial societies; the Revolutionary movement and the political foundations of the American Republic; the Market Revolution and the rise of middle-class culture; the antebellum South and the emerging West; and the origins and evolution of American cultural diversity. Offered fall semester.

An exploration of the development of the American cultural experience since 1865, focusing on the major material forces and intellectual currents that helped shape American attitudes, assumptions, institutions, behavior, and values. The course will draw upon insights from many disciplines and will include several kinds of cultural evidence (for example: literature, art, and photography; religious, political, and social thought and behavior; and economic, technological, and geographical development) as well as consideration of recent major synthetic works of cultural scholarship. Topics addressed and readings assigned are chosen to enlarge awareness of the transformation of America to a diverse, metropolitan, industrial society. These will include the relationship between nature and the city; the industrial revolution and changes in the workplace; immigration; changing class and gender relationships; the rise of leisure; and the development and triumph of modern corporate/consumer culture. Offered spring semester.

Required of all American Studies graduate teaching assistants assigned to AMS 150. Includes administrative techniques and test construction.

AMS 589 Approaches to Teaching American Studies. Three hours.
Prerequisite: Permission of the department.
A study of basic approaches to interdisciplinary teaching in American culture at the college level, along with supervised teaching experience.

AMS 591 American Period Seminar. Three hours.
In-depth study of a particular period or era in American historical experience. Recent examples include the Ragtime Era, the Jazz Age, the Great Depression, the Season of 1954–55, the '60s, contemporary America, the Postwar Period, the Romantic Revolutionaries (1905–14), the American Avant Garde (1893–1920), World War II: the Good War, the South and '30s Expression, the Civil Rights movement, the '50s, America between the Wars, the Colonial Period, the Aspirin Age, Postmodern America, Contemporary America, and Writing West.

AMS 592 American Topics Seminar. Three hours.
Study of special topics within the American cultural experience. Recent examples include American literary realism, women in America, the Civil Rights movement, the picture press, music and ethnicity, the politics of culture, regionalism in American culture, the changing American family, homelessness in America, American autobiography, American monuments, contemporary American folklore, Southern popular culture, Southern iconoclasts, politics and culture, historical memory, America by design, the other in America, women in America, race in America, 19th-century popular culture, and slavery and the Civil War in historic memory.

AMS 595 American Studies Colloquium, 1620–1865. Three hours.
Corequisite: AMS 585.
Discussion of methodological and theoretical issues in American Studies.

AMS 596 American Studies Colloquium, 1865–1960. Three hours.
Corequisite: AMS 586.
Presentation of research and methods.
AMS 597 Topics in American Cultural Analysis. Two hours. Coordinating course required of M.A. candidates in their final semester.

AMS 598 Research Not Related to Thesis. One to three hours. Pass/fail.

The Department of Anthropology of The University of Alabama offers programs leading to the master of arts degree and the doctor of philosophy degree. These programs seek to furnish a balanced view of anthropological inquiry by means of intensive training in the literature, methods, techniques, and skills required for research in anthropology. The MA builds on the inherent strengths of medium-sized departments—the ability to provide necessary background through small lecture courses and specialized training through the tutorial format of seminars and individually directed research projects. In short, the MA program provides students with a scholarly comprehension of the discipline, practical experiences in anthropological research situations, and the initial competency required of a professional anthropologist. Additionally, an inter-institutional program leading to the master's degree is offered in cooperation with the Department of Anthropology of The University of Alabama at Birmingham. See specific details at the website of the Department of Anthropology.

The PhD curriculum builds on the strengths of the master's degree program by concentrating on two emphases: 1) the archaeology of complex societies, pertaining to the emergence and spread of early civilizations in the Americas, and 2) medical anthropology, the study of the influence of social relations and culture on psychological and biological adaptation. The doctoral program is designed to prepare graduates with the skills needed to move easily into either academic or non-academic positions.

Admission Requirements

Students seeking MA degrees in anthropology at The University of Alabama must satisfy departmental entrance and examination requirements. An acceptable score on the Graduate Record Examination general test is required for admission. Students seeking PhD degrees must have already completed an MA in anthropology, either at Alabama or elsewhere, before undertaking doctoral work. Students are required to have taken graduate-level coursework in at least three of the four sub-disciplines in anthropology before being admitted to the PhD program.

See the Admission Criteria section of this catalog for more information.

General Degree Requirements

For the MA degree, each student must complete a minimum of 30 credit hours in courses numbered 500 or above. Without special prior approval of the student's advisor, the student's committee, and the director of graduate studies, neither ANT 598 Individual Investigations nor ANT 599 Thesis Research will count toward the 30 hours.

All MA graduate students must successfully complete a core program consisting of one graduate course in at least three of the four fields of anthropology: ANT 636 Social Structure or ANT 641 Culture, ANT 501 Anthropological Linguistics, ANT 670 Principles of Physical Anthropology, and ANT 625 Survey of the History of Archaeology. In addition, the seminar course ANT 600 Research Methodology is required.

Additional requirements include a comprehensive examination to be taken following the second semester in residence, reading knowledge of a foreign language or demonstration of a research skill such as statistical analysis, and admission to candidacy. Thesis and non-thesis options are available and the specific requirements for these options are published on the department's website. The MA degree will be conferred by The University of Alabama.

For the PhD program each student must complete 48 credit hours in courses numbered 500
or above. No more than 24 hours can be transferred from an MA program to the PhD program. A reading facility in one foreign language appropriate to the research topic must be demonstrated. Knowledge of quantitative methods and other advanced research skills must also be obtained through the required seminar ANT 601 Advanced Research Methods in Anthropology. Additional requirements include two core courses, each of which is specific to the doctoral tracks. For the archaeology of complex societies, these seminars are ANT 603 Theory and Method in Archaeology and ANT 604 Seminar in the Archaeology of Complex Societies. For biocultural medical anthropology, these seminars are ANT 610 Theory and Method in Medical Anthropology and ANT 612 Seminar in Biocultural Anthropology.

**Plan of Study**

Early in the graduate program, each student confers with a faculty adviser or major professor to select courses, discuss when and by which method the doctoral residency requirement will be completed, discuss research interests, and so forth. Then a Plan of Study is prepared and submitted to the Graduate School.

The **PhD Plan of Study** is available at the Graduate School website. All doctoral students must have a completed Plan of Study approved by the Graduate School no later than the semester during which the student will complete 30 semester hours of UA and/or transfer credit for the doctoral degree. Otherwise, a “hold” may be placed on future registrations.

If later there are changes in the Plan of Study, the student simply submits an amended Plan to the Graduate School at the time that the form for **Admission to Candidacy for Doctoral Degree** is submitted.

A preliminary examination must be passed before undertaking dissertation research. Six to 12 months of ethnographic or archaeological field work is expected, followed by analysis and the writing of the dissertation. The dissertation itself will then be presented and defended before the student's committee and other interested faculty. Additional information is in the **Degree Requirements** section of this catalog.

**Course Descriptions**

Prerequisites: Twelve hours in anthropology and graduate standing, or permission of the instructor.

**ANT 501 Anthropological Linguistics.** Three hours.
The scientific study of natural language; phonology and grammar, lexicon, and meaning; and the role of linguistics in anthropological research. Offered once a year.

**ANT 504 Analysis of Kinship Systems.** Three hours.
Techniques, methods, and theories bearing on the analysis of kinship semantics. Firsthand experience with the analysis of a particular kinship system. Offered according to demand.

**ANT 505 Culture, Mind, and Behavior.** Three hours.
The cultural and linguistic basis of cognitive organization, local systems of folk classification, and the collection and analysis of data of shared cultural and social information. Offered according to demand.

**ANT 507 Sexual Stratification in Society.** Three hours.
An examination of the various roles women play in society, including their relationships to the family, the economy, political organizations, and the religious system. The analysis juxtaposes women and men at all times. Offered according to demand.

**ANT 508 Ancient Civilizations of Mesoamerica.** Three hours.
A survey of the origin and development of Mesoamerican civilizations. Offered according to demand.

**ANT 509 Ancient Maya Civilizations.** Three hours.
Ancient Maya civilizations in Mexico and Central America from the earliest inhabitants until the Spanish Conquest.

**ANT 511 Culture, Health, and Healing.** Three hours.
Provides the student with an overview of health, illness, and healing as they vary between and within cultural systems.

**ANT 512 Peoples of Europe.** Three hours.
A survey of the standards, customs, and beliefs that typify European cultures. Offered according to demand.

**ANT 513 Peoples of Latin America.** Three hours.
A survey of the standards, customs, and beliefs that typify Latin American cultures. Offered according to demand.

**ANT 514 Peoples of Africa.** Three hours.
A survey of the standards, customs, and beliefs that typify African cultures. Offered according to demand.

**ANT 515 Peoples of East Asia.** Three hours.
A survey of the standards, customs, and beliefs that typify East Asian cultures. Offered according to demand.

**ANT 516 Peoples of Southeast Asia.** Three hours.
A survey of the standards, customs, and beliefs that typify Southeast Asian cultures. Offered according to demand.

**ANT 517 Peoples of the Pacific.** Three hours.
A survey of the standards, customs, and beliefs that typify the cultures of Oceania. Offered according to demand.

**ANT 518 Development in Non-Western Cultures.** Three hours.
A theoretical and descriptive study of social change and development in non-Western societies. Major emphasis will be on the effect of change on indigenous institutions. Offered according to demand.

**ANT 519 Myth, Ritual, and Magic.** Three hours.
A survey of the anthropological literature on religion, including such topics as myth, ritual, magic, witchcraft, totemism, shamanism, and trance states. Offered according to demand.

**ANT 520 Background of Anthropological Thought.** Three hours.
An intensive review of the work of several early figures in the development of social theory (e.g., Marx, Freud, Durkheim, and Weber), emphasizing their relevance for modern anthropology. Offered according to demand.

**ANT 521 Ethnography.** Three hours.
Planning, preparing, and executing ethnographic field work. Problems of health, logistics, data recording, obtaining support, and ethics. Observation and interviewing exercises. Offered according to demand.

**ANT 522 Topics in Cultural Anthropology: Political Anthropology.** Three hours.
An examination of the structure and organization of the political process and the sources of political power in nonindustrial societies. Offered according to demand.

**ANT 523 Topics in Cultural Anthropology: Legal Anthropology.** Three hours.
An examination of legal theory and legal processes from an anthropological perspective. Offered according to demand.

**ANT 524 Topics in Cultural Anthropology: Economic Anthropology.** Three hours.
An examination of the economic structure and organization of nonindustrial societies. Offered according to demand.
ANT 526 The Archaeology of Eastern North America. Three hours.  
An examination of the origin and development of pre-Columbian and early historic cultures of eastern North America. Offered according to demand.

ANT 527 The Archaeology of Western North America. Three hours.  
An examination of the origin and development of pre-Columbian and early historic cultures of western North America. Offered according to demand.

ANT 528 Analytical Archaeology. Three hours.  
Contemporary issues in concept formation, theory construction, methods, and techniques. Offered according to demand.

ANT 529 The Archaeology of Europe. Three hours.  
An examination of the origin and development of prehistoric and early historic European cultures. Offered according to demand.

ANT 530 The Archaeology of Africa. Three hours.  
An examination of the origin and development of prehistoric and early historic cultures of sub-Saharan Africa. Offered according to demand.

ANT 536 Social Anthropology. Three hours.  
Social organization and structure, social life and institutions, especially in nonliterate societies; and kinship, descent groups, marriage, residence, and local group composition. Offered every third semester.

ANT 537 Topics in Social Anthropology: The Analysis of Kinship. Three hours.  
Contemporary issues in the study of kinship, emphasizing semantics, typology, lexicon, the psychological reality of kin terms, the extensional hypothesis, and formal accounts. Offered according to demand.

ANT 538 Topics in Social Anthropology: Social Structure. Three hours.  
An examination of contemporary issues in the study of descent groups, marriage, residence, and local group composition in nonindustrial societies. Offered according to demand.

ANT 543 Advanced Field Investigations in Archaeology. Three to twelve hours.  
Directed field study in the excavation and analysis of archaeological deposits. Each student must design and conduct a research project, then adequately report the results. Off campus.

ANT 550 Problems in Anthropology. Three to six hours.  
Devoted to issues not covered in other courses. Offered according to demand.

ANT 560 Anthropology and Natural History Museums. Three hours.  
Examines the historical connections between anthropology and natural history museums in the U.S. Explores the present operation of such museums and develops exhibits based on collection studies.

ANT 571 Fossil Man and Human Evolution. Three hours.  
A survey of the discoveries, methods, and theories that provide the background for modern research in macroevolution.

ANT 572 Seminar in Human Evolution. Three hours.  
A combined lecture and seminar course that explores various theories of hominid phylogeny, the theorists responsible, and the considerations that influenced their thoughts.

ANT 573 Human Osteology. Four hours. Two hours' lecture, two hours' laboratory.  
A detailed introduction to human osteology, emphasizing the identification of fragmentary remains and the criteria for determination of age, sex, and race. Offered according to demand.

ANT 575 Human Adaptability. Three hours.
An introduction to the biological bases of human adaptability. Offered according to demand.

**ANT 576 Nutritional Anthropology.** Three hours.
An introduction to anthropological inquiries in nutrition—including food habits, food systems, and dietary variability—from a cross-cultural perspective. Offered every fourth semester.
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**ANT 598 Individual Investigations.** Three hours.
Directed nontesis research in archaeology, cultural anthropology, anthropological linguistics, or physical anthropology.

**ANT 599 Thesis Research.** One to three hours.

**ANT 600 Research Methodology.** Three hours.
Prepares students in the scientific method and research skills used in anthropology.
Instruction emphasizes grant writing, study design, interview and observation techniques, and the collection, management, and analysis of data using a statistical software package.

**ANT 601 Advanced Research Methods in Anthropology.** Three hours.
This seminar is designed to refine doctoral students' background in qualitative and quantitative research methods necessary for dissertation research. Emphasis is placed on the integration of qualitative and quantitative methods for students doing ethnographic research, and techniques of numerical induction for archaeology students.

**ANT 603 Theory and Method in Archaeology.** Three hours.
An examination of contemporary archaeological theory and method and their development during the 19th and 20th centuries.

**ANT 604 Seminar in the Archaeology of Complex Societies.** Three hours.
Contemporary issues in the archaeology of complex societies, including different aspects of complexity and attempts to classify and measure them.

**ANT 610 Theory and Method in Medical Anthropology.** Three hours.
A detailed introduction to theory and method in medical anthropology. Approaches include adaptation, biocultural, psychoanalytic, stress, and other theoretical perspectives.

**ANT 612 Seminar in Biocultural Anthropology.** Three hours.
A biocultural overview of the anthropology of health. Topics include biological and cultural approaches to various dimensions of human health and illness.

**ANT 620 Prehistory of North America.** Three hours.
An in-depth examination of the prehistory of the various areas of North America, focusing on environmental and cultural influences that affected ways of life.

**ANT 621 Native Americans in Ethnohistorical Perspective.** Three hours.
An examination of Indians and Eskimos of North America during the historical period, focusing on the impact of European contact on culture and society.

**ANT 625 Survey of the History of Archaeology.** Three hours.
A critical examination of archaeology's history as a science, with emphasis on intellectual trends, changes in method and theory, and recent developments. Offered once a year.

**ANT 636 Social Structure.** Three hours.
Social organization and structure, social life and institutions, especially in nonliterate societies; and kinship, descent groups, marriage, residence, and local group composition. Offered every third semester.

**ANT 640 Landmarks in Anthropological Research.** Three hours.
This course examines seminal works in the history of anthropology. Works may include books or smaller publications that exemplify important developments in theory and method.
**ANT 641 Culture.** Three hours.
This seminar reviews past and contemporary theories and approaches used in cultural anthropology.

**ANT 667 Methods in Prehistoric Iconography.** Three hours.
An exploration of anthropological and art-historical concepts as applied to the problem of meaning in prehistoric representational art.

**ANT 670 Principles of Physical Anthropology.** Three hours.
A series of seminars and lectures designed to refine the student's knowledge of research on nonhuman primates, fossil hominids, population genetics, and human variation and adaptation. Offered once a year.

**ANT 698 Individual Investigations.** One to nine hours.
Directed dissertation research in archaeology, cultural anthropology, anthropological linguistics, or physical anthropology.

**ANT 699 Dissertation Research.** Three to fifteen hours.

**UAB Course Descriptions**

**ANTH 601 Forensic Approaches to Osteology.** Three hours.
Applied human osteology, emphasizing ability to identify age, sex, and population type of skeletal material. Effects of disease and behavior on bones.

**ANTH 602 The Conquest of Mexico.** Three hours.
Examines the Spanish conquest of Mexico from both Spanish and indigenous perspectives. Surveys the institutionalization of Spanish control over the fallen Aztec Empire and the broader intellectual and material consequences of the conquest.

**ANTH 605 Advanced Cultural Anthropology.** Three hours.
Critical review of theoretical approaches in cultural anthropology.

**ANTH 604 Introduction to Mapmaking.** Three hours.
Introduction to theory and methods of cartographic representation, image analysis and GIS.

**ANTH 608 Advanced Linguistic Anthropology.** Three hours.
Historical development of theory and field practice of linguistics.

**ANTH 609 Advanced Archaeological Anthropology.** Three hours.
Principal theoretical approaches in 19th- and 20th-century archaeology; historical, processual, and postprocessual.

**ANTH 610 Advanced Physical Anthropology.** Three hours.
Human evolution, primatology, race, human genetics. Tasks performed by physical anthropologists.

**ANTH 611 Field Archaeology.** One to six hours.
Archaeological field and laboratory techniques, including excavation, surveying, and artifact analysis and description; general problems of archaeological interpretation.

**ANTH 615 Ethnographic Field Methods.** Three to six hours. Classroom instruction and practical experience in techniques of ethnographic fieldwork, including participant observation, household surveys, structured and unstructured interviewing, and genealogies.

**ANTH 622 Landscape Archaeology.** Three hours.
Archaeological techniques of reconstructing past landscapes, including remote sensing, GIS, survey, excavation, and environmental analysis.

**ANTH 626 Archaeology of the Pacific Islands.** Three hours.
Survey of Pacific Islands societies in the past drawing on archaeological, ethnographic, historic, linguistic, and biological data.

**ANTH 628. Comparative Religion.** Three hours.
Human behavior in relation to the supernatural; religion as a system of social behavior and values; theories of religion.

**ANTH 630 Animal Bone Archaeology.** Three to six hours.
Introduction to methods and theories of zooarchaeological research. Practical experience in processing, identification, and interpretation of animal bone remains from archaeological sites.

**ANTH 634. Observing the Earth from Space.** Three hours.
This course will provide students with an introductory knowledge of remote sensing analysis. Students will learn how to analyze diverse types of satellite imagery in a wide range of fields, and how to apply this knowledge in original research projects.

**ANTH 635 Ethnomedicine and Ethnopsychiatry.** Three hours.
Approaches and contributions of anthropology to the study of health, sickness, and healing. Physical environment and human adaptations as key determinants of health systems; culturally defined concepts of sickness, health, and healing; healing as social, as well as physiological, activity. Topics may include life stages, medical knowledge among different human groups, impact of culture contact on medical systems, ecological balance and population control, cultural definitions and treatment of abnormal behavior, healers, health and supernatural, social roles of the sick, and illness and social control.

**ANTH 637. Real World Remote Sensing.** Three hours.
Real world applications of remote sensing technology. Students work closely with UAB professors and scientists at NASA’s Marshall Space Flight Center doing original remote sensing research on diverse topics, possibly including terrorism, global warming, health, anthropology/archaeology, atmospheric studies, urban expansion, and coastal management.

**ANTH 650 Nationalism, Ethnicity, and Violence.** Three hours.
Social and cultural analysis of ethnicity and nationalist ideologies particularly where these have led to violent confrontations within modern nation-states. Considers primordialist versus constructionist theories of difference; the varying weight to be attributed to political, historical, and cultural factors in the study of nationalism; and the politics of culture versus the culture of politics.

**ANTH 653 Primatology.** Three hours. Biology, behavior, and distribution of living nonhuman primates with emphasis on field studies of old-world monkeys and apes.

**ANTH 657 Archaeology of Gender.** Three hours.
Cultural construction of gender differences in human societies; shifting definitions of proper male and female roles across cultures and through time.

**ANTH 660. Ecological Anthropology.** Three hours.
Examines interactions among behavioral, technological, institutional, and ideological features of human cultures that serve to adapt societies to their environment.

**ANTH 664 Political Anthropology.** Three hours.
The comparative analysis of political structures and process throughout the world, focusing especially on non-Western forms; a survey of anthropological attempts to understand the complex interplay of culture and power in human societies.

**ANTH 680 Anthropology of Slavery and Servitude.** Three hours.
Slavery as a social and cultural phenomenon in context of a broader investigation of relations of domination and exploitation in human social life.

**ANTH 685. Foundations of Symbolism.** Three hours.
Study of symbolic forms in myth and ritual and overview of theoretical approaches.
ANTH 690. Research Methods in Anthropology. Three hours.
Research design and methods including formulation of research problems, data collection, and data analysis; relationship between theory and method; field research techniques; preparation of grant proposals; anthropological ethics. **Prerequisite:** consent of the instructor.

ANTH 691 Special Problems in Cultural Anthropology. Two to six hours.
Supervised study of specified topic area; defined problem explored in depth. Topics determined by student and instructor interest in cultural anthropology.

ANTH 692 Special Problems in Archaeology. Two to six hours.
Supervised study of specified topic area; defined problem explored in depth. Topics determined by student and instructor interest in archaeology.

ANTH 693 Special Problems in Linguistics. Two to six hours.
Supervised study of specified topic area; defined problem explored in depth. Topics determined by student and instructor interest in linguistics.

ANTH 694 Special Problems in Physical Anthropology. Two to six hours.
Supervised study of specified topic area; defined problem explored in depth. Topics determined by student and instructor interest in physical anthropology.

ANTH 699 Thesis Research. One to three hours.
Independent development of research project. Admission to candidacy.
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6.3 DEPARTMENT OF ART AND ART HISTORY (ART AND ART HISTORY)
Professor Catherine Pagani, Chairperson, Office: 103 Garland Hall

The Department of Art and Art History offers programs leading to the master of arts (studio), the master of arts (art history), and the master of fine arts (studio). The major studio areas in the department are ceramics, painting, photography, printmaking, and sculpture. (The content of individual courses may be diverse and vary from traditional designations.) Concentrations within art history are offered in Renaissance, Baroque, 19th-century, 20th-century/Contemporary, and South/Southeast Asian and East Asian art.

Credits earned at accredited institutions may be transferred. Such transfers will be determined after completion at the University of at least 12 semester hours, or one term in residence, and upon review by the student's faculty committee. Graduate courses in both art history and art studio are normally taught only in the fall and spring semesters.

Admission Requirements
Applicants to all graduate programs must satisfy admission policies established by the Graduate School of The University of Alabama, listed earlier in this catalog. (The Graduate School does not require the MAT or GRE for admission to the graduate program in studio art; the GRE general test is required for admission to the graduate program in art history.) All application materials should be sent to the dean of the Graduate School at the time of application. Letters of recommendation should be sent to the Graduate Coordinator of the program to which the student is applying. Each studio program applicant must submit a comprehensive portfolio of work directly to the art department. The portfolio should include a minimum of 20 works of art in the proposed major (chosen from the areas listed above). Only CDs containing the applicant's artwork are to be accepted. It is recommended that a prospective graduate student hold a degree in art, having maintained a "B" average in art. Conditional acceptance into the program is possible. Upon completion of cited deficiencies the student would be granted full admission. All studio art students enter the MA-level graduate program. Residency is required of all studio art students.

The ideal prospective graduate student in art history holds the BA degree with a major in art history. All applicants should have completed 24 semester hours in undergraduate art history courses and courses in related subjects, having maintained a "B" average. An applicant who does not meet these minimum admission requirements but is found to be acceptable in every other way may be offered conditional acceptance into the program.

See the Admission Criteria section of this catalog for more information.

Degree Requirements

Master of Arts Degree in Studio Art
All new studio art students enter the MA program. The MA degree in studio art requires completion of a minimum of 30 semester hours of graduate work, including at least 6 hours in art history, 15 hours in a major studio field, 3 hours of graduate seminar, 3 hours of graduate critiques, and 3 hours of art studio electives. Candidacy for the degree is determined by a review at the completion of 18–24 semester hours. A thesis exhibition, written statement, and an oral review are required for successful completion of the program. The degree program must be completed within six years.

Master of Fine Arts Degree in Studio Art
Admission to the master of fine arts program is by recommendation of a faculty review committee, which meets at the time of the candidate's MA thesis exhibition. The committee will recommend that the candidate continue within the MFA program or finalize studies at the University with a completed MA degree.
The MFA degree requires the completion of a minimum of 60 semester hours of graduate work, including at least 9 hours of art history, 30 hours in a major studio area, 6 hours Graduate Seminar, 6 hours Graduate Critiques, and 9 hours in art history or art studio electives. The degree must be completed within six years of entering the studio graduate program. A graduate student may select a minor studio concentration of study or choose a variety of graduate-level classes offered within the art department or approved graduate-level elective courses. Admission to candidacy for the MFA degree is based on the delivery of a public lecture by the candidate addressing his or her research in visual arts. Successful candidacy is achieved when the candidate has proven able to defend his or her research clearly and coherently. The candidate must demonstrate proficiency in addition to displaying personal direction in his or her chosen area of study.

A thesis exhibition is presented at the end of the candidate's final term. During the exhibition, an oral examination is conducted by the student's faculty committee. At that time, the candidate defends their exhibition and written statement.

Review procedure. A graduate review committee is established by each graduate student. The committee consists of no fewer than four faculty members but may have an unlimited number of approved graduate faculty. Required appointees to this committee include the department chairperson (director of graduate studies), the major area professor, an art historian, and another art studio faculty member. The chairperson of the committee is the student's major area professor.

Master of Arts Degree in Art History
The MA in art history requires completion of 24 semester hours in art history, of which 6 hours may be taken in a related field. Courses are grouped into six general areas: Renaissance, Baroque, 19th-century, 20th-century/Contemporary, South/Southeast Asian and East Asian art. Students must take courses in at least two of the six areas, as well as ARH 550 Literature of Art. Students registered on The University of Alabama campus must take at least 6 hours of coursework at The University of Alabama at Birmingham.

Further requirements include (a) a reading knowledge of French, German, or another approved language, tested by examination; (b) a general written examination in art history prepared and read by the joint faculty; and (c) a written thesis (minimum of 6 hours).

The MA degree must be completed within a six-year period--the Graduate School's time limit for all master's degrees--and to avoid loss of graduate credit for completed coursework.

Additional information is in the Degree Requirements section of this catalog.

Course Descriptions

Art, Studio (ART)

ART 502 Studio Art. Three hours.
Prerequisites: Twelve undergraduate hours in the specific studio field requested, review of portfolio, and permission of the department chairperson.
This course is open only to graduate students who are not enrolled in a graduate program in the Department of Art.

The prerequisite for the following 500-level courses is graduate standing in art in the specific studio field (as determined by a review of the faculty committee and the permission of the department chairperson and instructor). Courses are offered for 3–6 hours each semester, except for ART 506 and ART 508, which are offered for 3 hours each semester.

ART 506 Independent Studies. Three hours (each semester).
Students may make proposals for projects not taught in the regular curriculum. These must be approved by a faculty sponsor and the chairperson of the department.

ART 508 Special Projects. Three hours.
Special projects course titles include Alternative Photographic Process, Photo-based Printmaking, Water Media on Paper, Figurative Modeling and Sculpture, Experimental Drawing and The Photographic Artist's Book.

**ART 510 Advanced Drawing Seminar.** Three hours.
The focus of this course will be the study and production of drawings as an activity that documents our memories, examines and explains the world around us, transforms our perceptions of time and space, and helps us invent new ways of seeing and thinking.

**ART 511 Graduate Seminar.** Three hours.
A critical examination of contemporary issues, philosophies, criteria, and ideas in art.

**ART 525/ART 625 Graduate Critiques.** Three hours.
This course examines the studio practice through critical discourse, defending and discussing aesthetic philosophy and its application to research in the visual arts.

**ART 530 Problems and Techniques for Teaching Studio Foundations.** Three hours.
Graduate students will acquire expertise with teaching concepts and techniques relative to studio foundations teaching.

**ART 602 Studio Art.** Three hours.
Prerequisite: Six hours of ART 502. Open only to graduate students who are not enrolled in a graduate program in the Department of Art.

**ART 606 Independent Studies.** Three hours.
Prerequisite: Six hours of ART 506. Students may make proposals for projects not taught in the regular curriculum. These must be approved by a faculty sponsor and the chairperson of the department.

The studio courses listed below carry 2–6 hours of credit each semester; credit for more than 3 hours, however, requires permission of a faculty sponsor and the department chairperson. 500-level courses are repeatable in preparation for the MA degree. 600-level courses are repeatable in preparation for the MFA degree.

**ART 512/ART 612 Ceramics.**
The ceramics program has a fully equipped facility with a complete inventory of clay and glaze materials. Facilities include equipment for clay mixing and preparation; workstations for forming and throwing; gas, wood fire, raku, and electric kilns; and materials for experimental kiln construction. Personal instruction is given in all forming techniques, glaze calculations, and firings. Students are encouraged to experiment with the medium and explore new processes. Emphasis is placed on the student's development of concepts and forms.

**ART 516/ART 616 Painting.**
The primary goal of the painting program is to enhance the student's ability in conceiving of a strong personal vision. The program defines painting as a complex and vital art form that exists in a state of constant flux, a tradition that is both mired in history and capable of regularly redefining itself. It equally embraces students who define painting as a practice that goes far beyond the brush, and those who employ more traditional methodologies.

**ART 518/ART 618 Photography.**
Photography is viewed as a means of personal expression and exploration, emphasizing development of the student's vision. Instruction is individually tailored and, although the facilities are designed for black and white printing, the exploration of alternative applications is encouraged. Graduate students are expected to increase their knowledge of the history of photography and contemporary art, and participate in teaching undergraduates. Facilities include a film developing area, two darkrooms, and a critique space. Computers are accessed through the digital media area.

**ART 520/ART 620 Printmaking.**
Graduate printmaking is conducted in a workshop situation, including group critiques and
technical demonstrations. The program philosophy embraces a broad spectrum of activities relating to the idea of the multiple and the history of printed material. Students are expected to master traditional techniques and encouraged to work in an interdisciplinary manner, exploring the boundaries of the media area. The facility comprises equipment for intaglio and relief printing, stone and plate lithography, screen printing, and photo-based/digital printmaking.

**ART 522/ART 622 Sculpture.**
The sculpture program allows students to work with an extensive range of media and processes while emphasizing conceptual development and refined technical ability. Sculpture encompasses traditional media, methods, and processes as well as technologies that can be adapted to sculptural activities, idioms, and forms. Facilities include a full wood shop, metal fabrication shop, foundry, critique/installation room, and graduate studio space.

**Art History (ARH)**
A maximum of 6 semester hours of 400-level courses may be taken for graduate credit in the art history master's degree program. The remainder of the coursework for the MA must be taken at the 500 level. In addition, 6 hours of courses must be taken at The University of Alabama at Birmingham. Any 400-level course may be taken for graduate credit at either institution.

Courses at the 500 level are taught at The University of Alabama and The University of Alabama at Birmingham and may be taken at either institution. The following courses (except for ARH 598 and ARH 599) are seminars; the content of each seminar will vary with the instructor. A student may take any seminar twice for credit. Two-thirds of the coursework for the MA must be taken at the 500 level. The following 500-level courses are offered at The University of Alabama.

**ARH 550 Literature of Art.** Three hours.
Principles and methodology of the discipline as described in the writing of its founders and chief makers; bibliographical research method and mastery. Required of all art history MA students.

**ARH 554 Research in Art History.** Three hours.
**ARH 555 Asian Seminar.** Three hours.
**ARH 556 The Arts of Buddhism.** Three hours.
**ARH 561 Critical Theory.** Three hours.
**ARH 565 Renaissance Seminar.** Three hours.
**ARH 570 Baroque Seminar.** Three hours.
**ARH 575 19th-Century Seminar.** Three hours.
**ARH 580 20th-Century Seminar.** Three hours.
**ARH 598 Independent Study.** Three hours.
**ARH 599 Thesis Research.** One to three hours.
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6.4 DEPARTMENT OF BIOLOGICAL SCIENCES (BSC)
Chairperson: Professor Patricia Sobecky, Office: 1320 Science and Engineering Complex.
Graduate Director: Professor Stevan Marcus, Office: 3310 Science and Engineering Complex

The department offers programs leading to the Master of Science in Biological Sciences, Master of Science in Marine Science, and Doctor of Philosophy in Biological Sciences degrees. The graduate program is designed to provide broad training in the biological sciences, with specialization in the fields of Molecular and Cellular Biology (MCB) or Ecology, Evolution, and Systematics (EES). Research foci within MCB include disease model systems; evolutionary and developmental genetics; microbiology and immunology; genomics; and protein biochemistry. Research foci within EES include population, community, and ecosystem ecology; microbial ecology; evolutionary biology; conservation genetics; animal behavior and physiology; and systematics, with a special emphasis on aquatic systems.

Research facilities include: Molecular Biology Core Facility, Steven Johnson Molecular Systematics Lab, Optical Analysis Facility, Aquatic Chemistry Laboratory, Animal Care Facility, as well as extensive museum collections and databases in the Scientific Collections Facility.

Local field sites include: J. Nicholene Bishop (Tanglewood) Biological Station, The University of Alabama Arboretum, Dauphin Island Sea Lab, Point Aux Pins Marsh Lab, and Talladega National Forest.

Admission Requirements

Before entering graduate study in the biological sciences, the student is expected to have a substantial knowledge of chemistry, mathematics, and physics, and to have completed basic courses in the biological sciences with high standards of scholarship. In general, a curriculum equivalent to that required of undergraduate majors in the Department of Biological Sciences is expected. Students admitted without this background may be required to make up course deficiencies without receiving graduate credit.

Two types of admission to the graduate program in the biological sciences are possible: regular admission and conditional admission. In general, to be considered for regular admission, a student must have an overall scholastic average of 3.0 (based on a 4.0 system), including a 3.0 grade point average for the last 60 hours attempted and a 3.0 average in all biological sciences courses attempted. In addition, the applicant must have received a combined score of at least 1200 on the verbal and quantitative portions on the general test of the Graduate Record Examination.

Consideration for conditional admission requires an overall scholastic average of 2.5 (based on a 4.0 system), including a 3.0 average for the last 60 hours attempted and a 3.0 average in all biological sciences courses attempted. Also required is a combined score of at least 1000 on the verbal and quantitative portions on the general test of the Graduate Record Examination. Each student admitted conditionally to the biological sciences graduate program must maintain a 3.0 average for his or her first 12 hours in the Department of Biological Sciences at The University of Alabama. All hours taken in the semester in which the student reaches 12 hours will be considered, even if by so doing the total exceeds 12 hours. If this requirement is not met, the student will be automatically dismissed without appeal following the semester in which these 12 hours are earned, except in those cases that are obviously beyond the student's control.

See the Admission Criteria section of this catalog for more information.

Degree Requirements
Students should refer to the *Graduate Student Handbook of the Department of Biological Sciences* for additional information.

**Master of science.** Plan I and Plan II both are available for the MS degree. A student pursuing an MS degree under either plan is expected to submit a formal research proposal by his or her second semester in residence, and to take final written and oral examinations before the degree is granted. Plan I requires 24 hours of coursework and a formal thesis; Plan II requires 30 hours of coursework and a written research report approved by the student's graduate committee. A "B" average must be maintained in all coursework.

**Doctor of philosophy.** A doctoral Plan of Study must be submitted to the Graduate School by the time the student completes 30 hours of UA and/or transfer for the doctorate. A minimum of 48 semester hours of graduate course credit is required for the PhD degree. A "B" average must be maintained in all coursework. Students also are required to take at least 24 hours in BSC 699 Dissertation Research. All requirements for the PhD must be completed within a period of seven years following admission to the doctoral program. There is no general requirement for a foreign language, although individual graduate committees may require a language. A formal dissertation is required, in addition to preliminary written and oral examinations and a final oral examination.

A department-approved **Admission to Candidacy for the Doctoral Degree** is submitted to the Graduate School as soon as possible after passing the preliminary (comprehensive) examination. See the online Graduate Catalog (*Sec. 4.11.3*) for details on Plan of Study, Admission to Candidacy, and all other degree requirements.

Additional information on the various degree programs is available on request from The University of Alabama, Department of Biological Sciences, Box 870344, Tuscaloosa, AL 35487-0344; or visit our website.

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**Course Descriptions**

*Prerequisite: Graduate standing.*

*Courses at the 500 level are not open to students who have received credit for the same courses at the 400 level.*

**BSC 500 Vertebrate Functional Morphology.** Four hours. Three lectures and one three-hour laboratory period.

Prerequisites: BSC 114:115, BSC 116:117, BSC 300, or permission of the instructor. Morphology of animals, primarily vertebrates, with emphasis on functional aspects of anatomy. Laboratory deals mainly with comparative anatomy of the vertebrates.

**BSC 503/BSC 504 Introduction to Biological Sciences Instruction.** Two hours. Students in the MS program who are not teaching assistants may receive up to 2 hours' credit. Students in the PhD program who are not teaching assistants may receive up to 4 hours' credit provided they teach two different laboratories.

**BSC 506 Introduction to Research in Biological Sciences.** One hour. Corequisite: Student must be in the first year of the graduate program. Surveys research programs in biological sciences.

**BSC 507 Research Techniques in Biology.** One to six hours. Individualized instruction and the application of research techniques to specific problems for graduate students in the department.

**BSC 512 Limnology.** Three hours. May be taken separately or with BSC 513. A study of freshwater environments and organisms living in lakes, ponds, and streams.
**BSC 513 Limnology Laboratory.** Two hours. One laboratory period. An optional laboratory accompanying BSC 512.

**BSC 514 Dendrology.** Three hours. One lecture and one four-hour laboratory period. Identification, classification, characteristics, and distribution of the principal forest trees of the United States. Two weekend field trips are required.

**BSC 516 Aquatic Vascular Plants.** Four hours. Two lectures and one four-hour laboratory period. Prerequisite: BSC 434 or BSC 534. Identification, classification, characteristics, and distribution of aquatic plant species. One weekend field trip is required.

**BSC 517 Environmental Modeling.** Three hours. Two lectures and one discussion period. Prerequisites: BSC 114:115, BSC 116:117, CH 101, CH 102, and MATH 125 (or equivalent). An integrated survey of quantitative principles and computer-based solution techniques important for understanding environmental systems and for environmental problem solving.

**BSC 520 Principles of Systematics.** Three hours. Three lectures. One organismal class (e.g., BSC 360, Plant Biology, BSC 373, Vertebrate Zoology, BSC 376, Invertebrate Zoology) AND BSC 383, Evolution, or permission of instructor. An introduction to the principles, methods, and applications of systematic zoology and the zoological classifications.

**BSC 521 Geomicrobiology.** Three hours. Prerequisites: One year of chemistry (CH 101:102), either physical science (GEO 101:102), ecology (BSC 385), microbiology (BSC 310), or permission of the instructor. This interdisciplinary course examines the interrelationships between microorganisms and earth processes and environments. Topics will focus on microorganismal involvement in mineral precipitation and dissolution and processes that control distribution of elements at and below the surface of the earth, as well as geochemical and mineralogical factors that exert important controls on microbial evolution and the structure of microbial communities.

**BSC 522 Climate Dynamics.** Three hours. Prerequisites: PH 101:102, MATH 125, GY 101:102. This course will provide students with a quantitative introduction to the earth's climate on global and regional scales, including interaction between atmosphere, ocean, and biosphere.

**BSC 523 Freshwater Ecosystems.** Three hours. Prerequisites: CH 101:102, CH 231:232 recommended, MATH 125, BSC 412/BSC 512 or equivalent. This course addresses the integration of physical and chemical components of drainage basins with biological metabolism, growth and reproduction along functional gradients of river, wetland, reservoir, and lake ecosystems.

**BSC 524 Human Physiology.** Three hours. Three lectures. Prerequisite: BSC 300. May be taken with BSC 525 or separately. Examines the cardiovascular, digestive, endocrine, muscular, neural, renal, reproductive and respiratory systems.

**BSC 525 Human Physiology Laboratory.** One hour. One four-hour laboratory period. Prerequisite: BSC 424. Corequisite: BSC 524. Centers on principles of physiology and instrumentation for physiology.

**BSC 528 Biology of Fishes.** Three hours. Two lectures and one laboratory period. Prerequisite: BSC 373 or permission of the instructor. A survey of the structure, function, ecology, and classification of fishes.

**BSC 531 Pathogenic Microbiology.** Three hours. Three lectures. Prerequisite: BSC 311 or permission of the instructor.
A study of microorganisms related to health and disease.

**BSC 532 Pathogenic Microbiology Laboratory.** Three hours. One lecture and two laboratory periods.
Prerequisite: BSC 313 or permission of the instructor.
Prerequisite or corequisite: BSC 531 or permission of the instructor.
Practical experience in the isolation, characterization, and identification of pathogenic microorganisms.

**BSC 534 Plant Taxonomy.** Four hours. Two lectures and one four-hour laboratory period.
Characteristics and distribution of the major families of vascular plants, and practice in the collection and identification of flowering plants. One weekend field trip is required.

**BSC 535 Immunology.** Four hours. Three lectures.
Prerequisite: BSC 310 or permission of the instructor.
Thorough exploration of various aspects of modern immunology at the molecular and cellular levels.

**BSC 536 Immunology Laboratory.** Three hours. One lecture and two laboratory periods.
Prerequisite: BSC 435, BSC 535, or permission of the instructor.
Practical experience in modern immunological techniques.

**BSC 539 Molecular Biology Laboratory.** Three hours. One lecture and one four-hour laboratory period.
Prerequisites: CH 337 and either BSC 450 or BSC 550, or permission of the instructor.
A survey of the common analytical techniques used in molecular biology. Topics include protein purification and characterization, enzymology, DNA isolation and restriction endonuclease mapping, and gene cloning.

**BSC 541 Developmental Biology.** Three hours. Three lectures.
Prerequisites: BSC 300 and BSC 315, or permission of the instructor.
The course provides basic information about events in developing animal systems, emphasizing cellular, molecular, and genetic research approaches to the study of development.

**BSC 544 General Virology.** Three hours. Three lectures.
Prerequisites: BSC 300 or BSC 311, and BSC 450 or BSC 550; or permission of the instructor.
The molecular biology of bacterial, animal, and plant virus replication, including the biophysical, biochemical, and biological properties of virus particles.

**BSC 548 Animal Behavior.** Three hours.
Prerequisites: Principles of Biology I & II (BSC 114/115 and BSC 116/117 or BSC 118/120); Ecology (BSC 385).
This course is designed to provide modern perspectives on the study of animal behavior, pulling from fields as diverse as evolutionary biology, ecology, psychology, neurobiology, economics, and conservation biology. Throughout the course, there will be an historical undercurrent, which will illustrate the roots of this truly inter-disciplinary field. The course is structured in a way that will allow you to gain a basic understanding of topics ranging from sexual selection, anti-predator behavior, personalities, and aggression during lecture. You will then have the opportunity to master some of the more important theories, concepts, and cutting-edge new hypotheses using various active learning approaches, including the art of reading and evaluating primary literature, critically dissecting experimental design, and working through intellectual problems in the field of animal behavior. This course is not meant to be an exhaustive tour-de-force through animal behavior; rather, we will dedicate our energies to understanding in great detail some of the most influential concepts in the field.

**BSC 549 Endocrinology.** Three hours.
Prerequisites: Principles of Biology I & II (BSC 114/118 or BSC 116/120); Cell Biology (BSC 300)
This course is designed to familiarize you with the endocrine system complete with the structure and function of various glands, the molecular triggers that activate hormone production from these glands, the biosynthesis of many hormones, and the actions of these hormones in target tissues.
hormones at the cellular, physiological, and behavioral levels. Lectures will be partly traditional, and partly interactive. Students should come prepared to engage in discussion, and to ask questions. Writing is a significant component of this course, and students will need to demonstrate proficiency in writing to earn a passing mark.

**BSC 550 Fundamentals of Biochemistry.** Three hours. Three lectures.  
Prerequisite: CH 332 or permission of the instructor.  
A one-semester survey of protein structure, enzyme kinetics, bioenergetics, and metabolism and its regulation.

**BSC 551 Molecular Biology.** Three hours. Three lectures.  
Prerequisite or corequisite: BSC 550 or permission of the instructor.  
A one-semester survey of the synthesis, processing, and degradation of DNA, RNA, and protein and the regulation of these processes.

**BSC 556 Microbial Ecology.** Three hours. Three lectures.  
Prerequisite: BSC 311 or permission of the instructor.  
A study of microorganisms in the environment, with emphasis on their roles in energy transformations, biogeochemical cycles, and biotic interactions.

**BSC 557 Microbial Ecology Laboratory.** Two hours. One four-hour laboratory period.  
Prerequisite: BSC 311 or permission of the instructor.  
Corequisite: BSC 556.  
A laboratory course that provides training in techniques for examination of the abundance, diversity, and activity of microorganisms in natural water, soil, and sediment environments.

**BSC 560 Human Developmental Biology.** Four hours.  
Prerequisites: BSC 300 and either BSC 400 or BSC 500 are recommended.  
Lecture and laboratory. Development of the human embryo and fetus, including molecular, physiological, and structural aspects of morphogenesis and functional development.

**BSC 564 Biology of Algae.** Four hours. Two lectures and one four-hour laboratory period.  
Freshwater and marine algae and their structure, development, taxonomy, and distribution.

**BSC 565 Principles of Toxicology.** Four hours.  
Study of the adverse affects of chemicals on living organisms and of methods for predicting the likelihood of these effects, including descriptive, mechanistic, and regulatory aspects.

**BSC 569 Histology of Vertebrates.** Four hours.  
Prerequisites: BSC 114:115 or BSC 118 and BSC 116:117 or BSC 120  
Lecture and laboratory. Identification of tissue types and components, histogenesis and function of tissues.

**BSC 572 Mycology.** Three hours. Two lectures and two laboratory periods.  
Prerequisite: BSC 310 or permission of the instructor.  
An introduction to the fungi and their biology, including aspects of their structure and function, taxonomy, genetics, and ecology.

**BSC 575 General Entomology.** Four hours. Two lectures and one four-hour laboratory period.  
Prerequisite: BSC 376 or permission of the instructor.  
A survey of the structure, function, classification, and habits of insects.

**BSC 576 Aquatic Insects.** Four hours. Two lectures and one four-hour laboratory period.  
Prerequisite: BSC 475, BSC 575, or permission of the instructor.  
A survey of aquatic insects, with emphasis on their identification, life histories, and ecology.

**BSC 580 Aquatic Biology.** Three hours. This course will examine the ecology of plants at different levels: individual, population and community.

**BSC 582 Conservation Biology.** Three hours. Three lectures.
A thorough examination of the principles of conservation biology.

**BSC 583 Evolution.** Three hours.  
Prerequisites: BSC 114:115 or BSC 118, BSC 116:117 or BSC 120, and BSC 315.  
Thorough investigation of evolution, including population genetics, molecular evolution, adaptation, and speciation.

**BSC 584 Aquatic Biology Seminar.** One hour.  
Review and discussion of current topics in aquatic biology.

**BSC 587 Biogeography.** Three hours. Three lectures.  
Prerequisite: BSC 385 or permission of the instructor.  
Examination of the ecological and historical factors influencing the geographic distribution of plants and animals.

**BSC 590 Stream Ecology.** Four hours. Two lectures and one laboratory period.  
Prerequisite: BSC 385.  
A thorough study of the structural (physical and biological) and functional (energy flow, nutrient cycling, community structure) attributes characteristic of stream and river ecosystems.

**BSC 593 Cell Cycle Regulation.** Three hours.  
Prerequisites: BSC 300 Cell Biology and BSC 315 Genetics.  
In-depth review and discussion of recent scientific research literature dealing with mechanisms of eukaryotic cell cycle regulation and their significance in human cancers. Provides a foundation for further studies in the cell cycle field, which impacts many areas of cell, molecular, and developmental biology.

**BSC 594 Signal Transduction in Neurobiology.** Three hours.  
Prerequisites: Undergraduate-level genetics and cell biology or developmental biology.  
Seminar on current topics related to signal transduction, as it pertains to the molecular basis of neurobiology and development.

**BSC 595 Advanced Cell Biology.** Three hours. Three lectures.  
Prerequisite: BSC 300 or permission of the instructor.  
Presents the structures, functions, and relationships of cellular organelles and the cytoskeleton.

**BSC 596 Bioremediation.** Three hours. Three lectures.  
Prerequisite: BSC 450 or BSC 550, and CH 331; or permission of the instructor.  
Study of the biological degradation of toxic chemicals in the environment.

**BSC 598 Research Not Related to Thesis.** One to fifteen hours. Pass/fail.

**BSC 599 Thesis Research.** One to fifteen hours. Pass/fail.

**BSC 602 Advanced Molecular Research Seminar.** One hour. Pass/fail.  
Student presentations of research background and current results. Students may enroll each semester.

**BSC 603 Current Topics in Molecular Biology.** One hour. Pass/fail.  
Student presentations of current research literature.

**BSC 604 Development, Toxicology, and Physiology Seminar.** One hour. Pass/fail.

**BSC 605 Ecology and Systematics Seminar.** One hour. Pass/fail.

Students attend and participate in a one-hour weekly seminar and present a 45-minute seminar during the semester. The seminar presented should be a synthesis of research on a particular topic in ecology or systematics, requires a practice session, and includes written
evaluations by the faculty.

**BSC 607 Advanced Research Techniques in Biology.** One to six hours. Individualized instruction and the application of research techniques to specific problems at an advanced level for graduate students in the department.

**BSC 612 Aquatic Secondary Production.** Three hours. Three lectures. A study of the population and production dynamics of aquatic animals, including theory, methods, and interpretation of the role of animals in ecosystem bioenergetics.

**BSC 631 Molecular Genetics of Lower Eukaryotes.** Three hours. Prerequisites: BSC 300, BSC 315. Survey of lower eukaryotic model systems using current and historical literature with an emphasis on the usefulness of these organisms to address particular biological questions.

**BSC 632 Higher Eukaryotic Genetic Model Systems.** Three hours. Critical analysis of higher eukaryotic genetic model systems used in modern molecular research.

**BSC 633 Critique of Research in Molecular Biology.** Three hours. Prerequisites: Any two graduate courses in molecular and cellular biology. Critical analysis of current research in molecular biology. Narrow topics from rapidly moving fields will be selected for detailed reading and class discussion.

**BSC 634 Practical Molecular Biology.** Three hours. Prerequisites: Undergraduate-level biochemistry and genetics courses. This course presents the theoretical basis for commonly used molecular biology procedures that are in general use in all fields of biology.

**BSC 635 Developmental Genetics.** Three hours. Two lectures and one discussion period. Prerequisite: BSC 441, BSC 541, or equivalent. A course in the genetic and molecular mechanisms of development for graduate students.

**BSC 651 Population Ecology.** Three hours. Prerequisites: BSC 385 or equivalent and MATH 125 or equivalent. Theory and practice of population ecology (plants and animals); sampling, population processes, regulation, interspecific interactions, age structure analysis, and applications in resource management.

**BSC 652 Community Ecology.** Three hours. Prerequisites: BSC 385 or equivalent; MATH 125 or equivalent; CHS 525; ST 550 or equivalent. Thorough investigation of theory and empirical studies of ecological communities (plant, animal, microbial), including methods, community structure, diversity, succession, links to ecosystem function, resource management.

**BSC 653 Ecosystem and Global Ecology.** Four hours. Prerequisites: At least one undergraduate course in ecology. This course provides comprehensive coverage of ecosystem concepts and processes at scales from local to the biosphere. The course encompasses the full range of the earth’s biological diversity (plants, animals and microbes), and its ecosystems (freshwater, terrestrial, marine, and many intermediates). It explicitly integrates the roles of these organisms into ecosystem functioning and global processes.

**BSC 656 Microscopical Techniques.** Four hours. Prerequisite: Permission of the instructor. An introduction to the methods and applications of electron microscopy in biological research, including techniques for preparation of biological specimens, operation of the transmission and scanning electron microscopes, and photography.

**BSC 660 Protein Structure and Function.** Three hours. Three lectures.
Prerequisite: BSC 439, BSC 539, CH 462, or CH 562.
A study of the structure and function of proteins: enzymatic reaction mechanisms and enzyme kinetics.

**BSC 695 Special Topics in Biological Sciences.** One to four hours.
Courses with this number may address any biological topic not covered by existing courses. The credit hours and format are arranged as appropriate to each topic. The specific course title is added at the time the course is taught.

**BSC 696 Resident Study at an Approved Biological Station.** Two to six hours.
Prerequisite: Written approval from the department must be received in advance. Credit for the course is determined by the extent of the coursework.

**BSC 698 Research Not Related to Dissertation.** One to fifteen hours. Pass/fail.

**BSC 699 Dissertation Research.** Three to fifteen hours. Pass/fail.
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6.5 DEPARTMENT OF CHEMISTRY (CH)
Chairperson: Professor Kevin Shaughnessy, Office: 2072 Shelby Hall
Graduate Director: Professor Stephen Woski, Office: 3036 Shelby Hall

The Department of Chemistry offers programs in the five traditional areas of chemistry (analytical, biochemistry, inorganic, organic, and physical) leading to the master of science in chemistry (Plan I or Plan II,) as outlined in the Academic Policies section of this catalog) and the doctor of philosophy in chemistry. The completion of a master's degree is optional for students enrolled in the PhD program.

Admission Requirements
In addition to meeting the general requirements of the Graduate School, entering graduate students should have completed, with an average grade of "B" or better, undergraduate coursework equivalent to a major in chemistry. Applicants may qualify for regular or conditional admission. To be considered for regular admission, an applicant must have a verbal and quantitative score of at least 1000 on the general test of the Graduate Record Examination or a score at the 50th percentile on the Miller Analogies Test.

An applicant whose credentials do not meet the requirements for regular admission may be considered for conditional admission if the applicant has a grade point average of 2.5 overall and an acceptable score on the appropriate admission examination. An applicant may be considered for conditional admission if he or she meets either the 3.0 GPA requirement for regular admission or the entrance examination requirement for regular admission. A student admitted conditionally must remove any undergraduate deficiencies during the first year of graduate study and must remove the condition by earning an average of “B” or better in the first 12 hours of graduate-level work.

Diagnostic examinations covering the traditional areas of chemistry are required of all entering graduate students. These examinations are given a few days prior to registration for the first semester so that the results may be used by the departmental graduate committee in planning the student's coursework for the first year.

See the Admission Criteria section of this catalog for more information.

Degree Requirements
The requirements for the MS in chemistry are the same as the Graduate School's general requirements. The PhD degree requirements also follow the policies in the Graduate Catalog. The comprehensive examination usually consists of a number of written cumulative examinations plus the oral defense of an original research proposal. In addition, acceptable literature and research seminars must be presented to the chemistry faculty and graduate students. The PhD student's research performance is evaluated by his or her research advisor with concurrence of the student's dissertation committee. Normally, the student is expected to be an author or coauthor of at least one publication in a refereed scientific journal prior to the awarding of the degree.

The PhD Plan of Study is available at the Graduate School website. All doctoral students must have a completed Plan of Study approved by the Graduate School no later than the semester during which the student will complete 30 semester hours of UA and/or transfer credit for the doctoral degree. Otherwise, a “hold” may be placed on future registrations.

A department-approved Admission to Candidacy for the Doctoral Degree is submitted to the Graduate School as soon as possible after passing the comprehensive (preliminary) examination. See the online Graduate Catalog Degree Requirements section for details on Plan of Study, Admission to Candidacy, and all other degree requirements.
Financial Assistance
Financial assistance for graduate students in chemistry is available through fellowships, graduate teaching assistantships, and graduate research assistantships.

Course Descriptions: Analytical Chemistry

CH 521 Introduction to Graduate Analytical Chemistry. Three hours.
Generally, this course is for entering students whose undergraduate training in analytical chemistry is insufficient.

CH 524 Spectroscopic Methods of Analysis. Three hours.
Provides graduate students with knowledge of the fundamental aspects of various modern methods of spectroscopic analysis. Reference to analytical applications and experimental methods is made, where relevant.

CH 525 Chromatography. Three hours.
Incorporates both a theoretical and a practical component. The separations theory will be developed and applied to gas chromatography and high pressure liquid chromatography/planar chromatography. Hyphenated techniques are emphasized. Students must master a GC/MS tutorial and carry out a project on analysis of an unknown.

CH 526 Chemometrics. Three hours.
Chemometrics involves the application of statistical and mathematical methods to chemistry. Areas of emphasis will be data and error analysis, calibration, experimental design, signal processing and transform procedures, and data description and enhancement.

CH 621/ CH 622 Current Trends in Analytical Chemistry. Three hours.

CH 625 Electrochemistry. Three hours.
Introduces the fundamentals of electrochemistry and their applications to chemical problems. Special emphasis will be given to the study of electrochemical methods, electrode reaction mechanisms and the interpretation of electrochemical results for organic and inorganic systems.

CH 626 Surface Analytical Techniques. Three hours.
Introduces the student to the instrumentation and techniques used to study surfaces and interfaces. Spectroscopic, microscopic, desorption, and vacuum techniques are covered.

CH 627 Mass Spectrometry. Three hours.
Deals with all areas of mass spectrometry (MS), including single and multiple stage MS and chromatography/MS. The emphasis is on fundamental principles and instrumentation, as well as applications and data interpretation.

Course Descriptions: Biochemistry

CH 561 Biochemistry I. Three hours.
First-semester course in basic biochemistry. Structure and properties of biological molecules, including proteins, DNA, RNA, carbohydrates, lipids, and enzyme cofactors and prosthetic groups. Introduction to intermediary metabolism and glycolysis. Offered fall semester.

CH 562 Biochemistry II. Three hours.
Continuation of basic one-year course in biochemistry. Intermediary metabolism, TCA cycle, oxidative phosphorylation, and catabolism of biomolecules. Biosynthesis of amino acids, nucleotides, carbohydrates, and lipids. DNA and RNA replication, with introduction to recombinant technology. Protein biosynthesis and membrane transport. Offered spring semester.
CH 563 Biochemistry Laboratory. Three hours.
One lecture and one six-hour laboratory. Biochemical techniques within the structure of a
semester-long research project. Topics include protein purification and chromatography,
spectroscopy, electrophoresis, kinetics, and DNA manipulation.

CH 564 Biophysical Chemistry. Three hours.
The study of physical techniques applied to the development and experimental verification of
biochemical hypotheses. Examples include forms of spectroscopy, treatment of multiple
equilibria, and enzyme kinetics. Examples of applications are drawn from such areas as
oxygen transport, oxidative phosphorylation, and photosynthesis.

CH 565 Bio-Inorganic Chemistry. Three hours.
Study of current knowledge on the roles of metal ions in biological systems, including
structural and catalytic functions. Topics include bio-coordination chemistry, spectroscopic
and magnetic methods, and kinetics.

CH 566 Bio-Organic Chemistry. Three hours.
Application of organic chemical concepts to biochemical systems. Topics include enzyme
mechanisms at the molecular level, the chemistry of biomolecules including nucleic acids,
peptides, and saccharides, and the development of chemical methods for the manipulation of
biochemical systems.

Course Descriptions: Inorganic Chemistry

CH 501 Introduction to Graduate Inorganic Chemistry. Three hours. Three lectures.
Generally, this course is for entering graduate students whose undergraduate training in
inorganic chemistry is insufficient.

CH 565 Bio-Inorganic Chemistry. Three hours. Study of current knowledge on the roles of
metal ions in biological systems, including structural and catalytic functions. Topics include
bio-coordination chemistry, spectroscopic and magnetic methods, and kinetics.

CH 601 Advanced Inorganic Chemistry I: Structural Methods in Inorganic
Chemistry. Three hours.

CH 602 Chemistry of Coordination Compounds. Three hours. Three lectures.

CH 604 Chemistry of the Main Group Elements. Three hours. Three lectures.

CH 605 Special Topics in Inorganic Chemistry. Three hours. Three lectures.

CH 606 X-Ray Crystallography. Three hours. Three lectures.

CH 609 Organometallic Chemistry. Three hours.

CH 611 Inclusion and Molecular Recognition. Three hours. Three lectures.

Course Descriptions: Organic Chemistry

CH 530 Introduction to Graduate Organic Chemistry. Three hours. Three lectures.
Generally, this course is for entering graduate students whose undergraduate training in
organic chemistry is insufficient.

CH 531 Advanced Organic Chemistry I: Physical Organic. Three hours.
Theory and mechanism of organic transformations, detailed evaluation of organic structure,
molecular dynamics, molecular orbital interactions, molecular symmetry, stereochemistry of
reactions, and energetics of reaction paths.

http://graduate.ua.edu/catalog/15500.html

CH 566 Bio-Organic Chemistry. Three hours. Application of organic chemical concepts to biochemical systems; enzymatic mechanisms; chemistry and biochemistry of nucleic acids, peptides, and saccharides.

CH 609 Organometallic Chemistry. Three hours. Structure, bonding, and reactivity of organotransition metallic compounds, mechanisms of transformations and fundamental reaction types, applications to catalysis and organic synthesis.

CH 635 Selected Topics in Organic Chemistry. Three hours.


Course Descriptions: Physical Chemistry

CH 540 Introduction to Graduate Physical Chemistry. Three hours. Three lectures. Generally, this course is for entering graduate students whose undergraduate training in physical chemistry is insufficient.

CH 541 Advanced Physical Chemistry I: Kinetics and Statistical Thermodynamics. Three hours. Three lectures. Prerequisite: CH 540 or equivalent.

CH 549 Advanced Physical Chemistry II: Atomic and Molecular Structure. Three hours.

CH 643 Quantum Mechanics. Three hours.

CH 645 Selected Topics in Physical Chemistry. Three hours.

Course Descriptions: Miscellaneous

CH 570 Research Techniques Chemistry. One to six hours.

CH 585/CH 586 Chemistry Seminars. Two hours.

CH 599 Thesis Research. Credit to be arranged.

CH 660 Advanced Research Techniques. One to six hours.

CH 680 Initial Research Review. One hour.

CH 681 Original Research Proposal. One hour.

CH 699 Dissertation Research. Credit to be arranged. Three-hour minimum.
The Department of Communicative Disorders offers a graduate program leading to the master of science degree in speech-language pathology. The program is accredited by the Council on Academic Accreditation through the American Speech-Language-Hearing Association.

The program combines coursework, observation, and practicums to familiarize students with communicative disorders and to develop their skills in assessment and rehabilitation. Most students with undergraduate degrees in communicative disorders will complete the degree requirements in five semesters of full-time study. Students who complete the master's degree will also have met the academic and practicum requirements for the Certificate of Clinical Competence from the American Speech-Language-Hearing Association and for a license from the State of Alabama. These credentials enable graduates to be employed in clinical settings as well as in the public schools of Alabama and many other states, depending upon the certification requirements of those states.

Practicum sites include UA's Speech and Hearing Center, public schools, DCH Regional Medical Center, University Medical Center, West Alabama Rehabilitation Center, Bryce Hospital, RISE Program, VA Medical Centers in Tuscaloosa and Birmingham, and other sites in the Birmingham area. Certified and/or licensed professionals supervise at all sites.

Admission Requirements
Applicants must submit scores on the Graduate Record Examination general test or the Miller Analogies Test. After admission to a program, each student's effectiveness will be given a broad-based evaluation by faculty and supervisors. Decisions on clinical placement, completion of the program, or termination of the student from the program will be based on factors such as course grades, demonstrated clinical competence, and personality factors. See the Admission Criteria section of this catalog for more information.

Degree Requirements
The requirements for the master of science degree follow the general policies outlined in the Degree Requirements section of this catalog.

Course Descriptions
Students may not receive credit at both the 400 and 500 levels for courses of equivalent content. Graduate students enrolled in 500-level courses that are also offered at the 400 level will be expected to perform extra work of an appropriate nature. Graduate credit will not be granted at the 400 level.


CD 504 Transdisciplinary Teams in Speech and Hearing. One hour. This course will include presentation and discussion of transdisciplinary assessment and intervention techniques with individuals with language and communication disabilities.

CD 505 Augmentative/Alternative Communication (AAC). Three hours. A review of the basic aspects of the field of augmentative/alternative communication, including aided and unaided symbols, strategies, and techniques. An overview of augmentative/alternative communication assessment and intervention principles and procedures will be presented.
CD 506 Sociolinguistics in Speech-Language Pathology. Three hours. A framework for systematically analyzing cultural similarities and differences. Examination of cultural differences, verbal and nonverbal, in the clinical setting.

CD 507 Technical Writing for Speech-Language Pathology. Two Hours. This course will provide students with the necessary writing tools to develop efficient and professional technical writing skills pertinent to the field of speech–language pathology.

CD 509 Language Development. Three hours. Advanced study of normal language and communication development. Presentation and discussion of theories, individual differences, and cultural differences in typically developing children.


CD 514 Autism Spectrum Disorders. Three Hours. This course will include presentation and discussion of theories and methods of language assessment and intervention of various language-impaired populations.

CD 515 Professional Issues. One hour. Study of professional issues in the field of communicative sciences and disorders. Includes current issues, practice standards, certification, licensure, ethics, employment, and professional organizations.

CD 516 Multicultural Issues. Three hours. Study of multicultural issues and how they affect speech and language. Presentation and discussion of American cultures and communicative differences.

CD 517 Advanced Clinical Practicum, Speech. Two to three hours. Individual assignments in selected areas of speech and language therapy. Clinical practice and scholarly investigation, with regular staff consultation.

CD 518 Externship in Speech-Language Pathology. One to six hours. Forty hours a week of clinical practice in setting. Application of theory, knowledge and skills in an intense external practicum site.

CD 520 Special Topics in Communicative Disorders. One to three hours. Graduate students will enroll in special topics one or more times depending upon offerings and student program interests. Topics will vary annually to reflect students' needs for educational experiences within the profession appropriate at the time.


CD 542 Public School Internship. Three to six hours. Organization, management and implementation of public school speech, language, and hearing programs will be discussed. Students will receive supervised clinical practice in the public schools.


CD 552 Neurology I. Three hours. Basic neuroanatomy of the normal human cortex and what happens when impacted by disease or trauma.
CD 553 Neurology II. Three hours. Advanced study of the nature, assessment, and treatment of language and cognitive disorders associated with acquired brain injury, such as stroke, TBI, and dementia.

CD 554 Fluency Disorders. Three hours. The study of the nature, assessment, and treatment of stuttering. Emphasis on understanding the different onset and developmental theories and different approaches to treatment.

CD 555 Voice Disorders. Three hours. Advanced study of the physiological, acoustical, and psychological factors underlying voice disorders, methods of rehabilitation, and problems in research.

CD 556 Acquired Motor Speech Disorders: Adults. Three hours. Advanced study of the nature, assessment, and treatment of acquired speech disorders including dysarthria and apraxia.


CD 558 Dialect Reduction. One to three hours. Study of diagnostic and therapeutic methods of reduction of dialect in persons where English is not their first language and where dialect interferes with intelligibility.

CD 559 Instrumentation for Speech and Voice Analysis. One to three hours. Theory and practice of speech and voice analysis techniques which may include laryngeal imaging, acoustic analysis, aerodynamics analysis, and interpretation of spectrograms.

CD 575 Dysphagia in Children. One to three hours. Advanced study of the nature, assessment, and treatment of swallowing disorders in children. Special populations (tracheostomized, ventilator) will be included.

CD 576 Dysphagia in Adults. Three hours. Advanced study of the nature, assessment, and treatment of swallowing disorders in adults. Special populations (tracheostomized, ventilator-dependent) will be included.

CD 597 Case Studies in Speech-Language Pathology. One hour. Multidimensional case studies are presented for discussion and case management. Strategies for successful completion of comprehensive and PRAXIS exams are discussed.

CD 598 Research Not Related to Thesis. One to six hours. Planning, executing, and evaluating research. For students following Plan II.

CD 599 Thesis Research. One to six hours. All aspects of the thesis, from selecting a problem to writing the results and conclusions.
Mission Statement. The mission of the Department of Criminal Justice is to develop and disseminate knowledge about crime, criminal justice, deviance, and social organization through research, teaching, and service to the community. Grounded in the social sciences and governed by the College of Arts and Sciences of The University of Alabama, the department respects liberal values, encourages open-mindedness, and pursues in its programs both demographic and curricular diversity.

Concerning students at the master's level, the department's mission is development of research skills and the expansion of conceptual and practical knowledge critical to fulfillment of leadership roles in criminal justice or in the social services. Master's degree students planning to proceed to PhD programs can expect from the department thorough training in the theories, methodologies, and empirical findings that promote understanding of deviance, crime, criminal justice, and social organization.

Admission Requirements
Admission into the master of science program is limited. An applicant must hold a bachelor's degree from an accredited college or university. An undergraduate major in the social sciences is desirable, but students with superior undergraduate records in other fields are encouraged to apply.

It is the policy of the criminal justice faculty to admit those students who demonstrate potential for successfully completing the master's degree program. Primary consideration is given to the applicant's scholastic record and test scores. Admission decisions for the master of science program are made in April for the fall semester and in November for the spring semester. Additional information is in the Admission Criteria section of this catalog.

Degree Requirements
The graduate program in Criminal Justice includes a thesis or a non-thesis option. Under both options, the student has considerable latitude to design a program to fit particular needs. All entering students must specify one of the two options during the second semester of academic work. Both options have core courses, including criminological theory, research in the criminal justice process, and applications of statistics in criminal justice.

Up to 6 hours of approved coursework may be transferred from other universities. Up to 6 hours of approved coursework may be taken in other departments at The University of Alabama and may be applied to the degree when it is consistent with the student's degree plan and approved by the department. The department does not accept 400-level courses toward degree requirements for the Master of Science in Criminal Justice.

All requirements for the master's degree must be completed during the six years (18 fall, spring, and summer semesters) immediately preceding the date on which the degree is to be awarded. However, students generally can complete degree requirements in 18-24 months. Additional information is in the Degree Requirements section of this catalog.

MS in Criminal Justice, Thesis Option. This option requires a total of 30 credit hours including 9 of core requirements, 6 for thesis research, and 15 for elective courses. CJ 599 should be taken after core requirements have been completed.

Students must pass public oral defense of the thesis. Thesis students must also pass a written and/or oral comprehensive examination (ordinarily done during the thesis defense).
Thesis Option Degree Requirements Summary

Core Course Requirements Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJ 581</td>
<td>Application of Statistics in Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>CJ 584</td>
<td>Seminar in Criminological Theory</td>
<td>3</td>
</tr>
<tr>
<td>CJ 586</td>
<td>Research in the Criminal Justice Process</td>
<td>3</td>
</tr>
<tr>
<td>CJ 599</td>
<td>Thesis Research in Criminal Justice</td>
<td>6</td>
</tr>
<tr>
<td>Comprehensive Exam</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

MS in Criminal Justice, Nonthesis Option. This option requires a total of 33 credit hours including 9 of core requirements, and 24 for elective courses. Nonthesis students must also pass a written and/or oral comprehensive examination based on the content of the degree program (ordinarily done after the completion of 18 hours of coursework).

Nonthesis Option Degree Requirements Summary

Core Course Requirements Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CJ 581</td>
<td>Application of Statistics in Criminal Justice</td>
<td>3</td>
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<tr>
<td>CJ 586</td>
<td>Research in the Criminal Justice Process</td>
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<tr>
<td>Comprehensive Exam</td>
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<tr>
<td>Electives</td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td>33</td>
</tr>
</tbody>
</table>

For both options, the application for admission to candidacy for the master's degree should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama. It must be approved by the time of registration for the semester in which requirements for the degree are to be completed. Each candidate for a master's degree must apply for graduation through the Office of the Graduate School no later than the registration period for the semester or the first session of the summer term in which requirements for the degree are to be completed. The candidacy form and graduation form both are available at the "Graduate School Forms" icon on the Graduate School's homepage.

Course Descriptions

**CJ 503 Organized Crime.** Three hours.
Focus on organized crime in the United States and examination of organized crime groups around the world.

**CJ 504 Health and Crime.** Three hours.
The health consequences of social deviance and the impact of criminalization for individual and societal wellbeing. Seminar discussions cover the criminalization of mental and physical illness and illnesses arising from criminal behavior and incarceration.

**CJ 510 Seminar in Community Corrections.** Three hours.
Development, organization, operation, and evaluation of community corrections systems as intermediate sanctions and alternatives to incarceration.

**CJ 520 Seminar in Current Law Enforcement Problems.** Three hours.
Analysis of selected areas of law enforcement. Emphasis is on currently developing trends.


CJ 550 Seminar in the Judicial Process and Social Policy. Three hours. Examination of the American legal system from a political science and socio-legal perspective. Seminar covers the "rights revolution," the process of dispute settlement, judicial decision making, public opinion and the courts, and the United States Supreme Court.

CJ 550 Seminar in Correctional Policy. Three hours. Examines the historical and contemporary policy trends in institutional and community corrections.


CJ 584 Seminar in Criminological Theory. Three hours. Examination of classical, neoclassical, positive, and social-defense theories of criminality and their interrelation with the broader problems of crime control. Offered spring semester.

CJ 586 Research in the Criminal Justice Process. Three hours. Prepares the student to develop and to implement basic research designs. Offered fall semester.

CJ 590 Special Topics in Criminal Justice. Three hours. Offers an opportunity for faculty and students to explore in depth topics of contemporary interest that are not generally covered in the standard courses. Course content will vary from section to section.

CJ 591 Practicum in Research and Program Evaluation. Three to six hours. Allows students to develop and implement an evaluation of an innovative or existing program in criminal justice, with faculty guidance.

CJ 592 Independent Study. Three hours. Research under faculty supervision in any area of interest to the student. Content may not relate to thesis or policy and practice project.

CJ 598 Criminal Justice Policy and Practice. One to six hours. Pass/fail. Provides credit for a major written project completed under the supervision of two faculty members. Research may be directed by any member of the faculty who accepts responsibility for supervising the thesis.

CJ 599 Thesis Research in Criminal Justice. One to six hours. Pass/fail. Research may be directed by any member of the faculty who accepts responsibility for supervising the thesis.
The department offers programs leading to the master of arts, the master of arts in teaching English to speakers of other languages (Applied Linguistics/TESOL), the master of fine arts in creative writing, and the doctor of philosophy.

Requirements for the MA Degree in English

Admission Requirements
Applicants for graduate work in English are required to take the Graduate Record Examination general test and the writing test. Each applicant should submit a sample of his or her critical writing (normally an essay of 10–20 pages written for an upper-level English course or an excerpt from a senior thesis). Unconditional admission to the MA degree program in English is dependent upon the student's having satisfied the general requirements for admission to the Graduate School. Conditional admission may be allowed under the stipulations outlined in the general admission policy of the Graduate School. Application materials should be received by January 2 to ensure full consideration for admission for the following fall term; applications received after January 2 will be reviewed for admission, but they may not meet the deadlines for fellowship or assistantship consideration.

Additional information for all degree programs in the Department of English is in the Admission Criteria section of this catalog.

Degree Requirements
With the exception of students admitted into the master's program to pursue a concentration in Renaissance studies, composition-rhetoric, or applied linguistics /TESOL (requirements for those programs follow), all candidates for the master's degree are required to take a total of 30 credits, including the following: 3 hours in bibliography and research (EN 537 Introduction to Graduate Studies, which is normally offered every fall and which students are encouraged to take in their first semester, for maximum benefit); 3 hours of critical theory (EN 535 Literary Criticism, EN 536 Advanced Modern Criticism, or EN 635 Seminar in Literary Criticism); and 3 hours of composition pedagogy (EN 532 Approaches to Teaching Composition). All master's students must take at least three courses at the 600 level. Students not writing the thesis (Plan II) will take 6 credits of electives to acquire the 30 credits for completion. Students writing a thesis (Plan I) will take 6 thesis hours. Students with teaching assistantships must take the summer practicum before their first semester of service and the practicum courses EN 533 and EN 534 during the year in which they begin teaching.

Additional information is in the Degree Requirements section of this catalog for all programs in the Department of English.

Plan I (thesis plan) students must complete at least 24 semester hours of coursework in English before writing the thesis, which must be a historical, critical, or otherwise analytical treatise. Thesis-plan students must take 6 semester hours of thesis research (EN 599) in addition to their 24 hours of coursework for a total of 30 hours. At least three of these courses must be at the 600 level. For additional information regarding the master's thesis in English, visit the departmental website and contact the director of graduate studies in the English department.

Plan II (non-thesis plan) students must take at least 30 semester hours of coursework in English. At least three of these courses must be at the 600 level. See the course requirements for all master's students cited above. During the fourth semester of the program, students
must pass a written comprehensive examination as their “capstone experience.” See details below.

Degree requirements for the MA in English with a concentration in Renaissance studies. Students admitted as candidates for the master of arts in English with a concentration in Renaissance studies are required to take the following: 3 hours in bibliography and research (EN 537 Introduction to Graduate Studies); 3 hours of critical theory (EN 535 Literary Criticism, EN 536 Advanced Modern Criticism, or EN 635 Seminar in Literary Criticism); 3 hours in medieval literature; 3 hours of Shakespeare (EN 566); 3 hours of non-Shakespearean Renaissance literature (either EN 565 Renaissance Drama or EN 563 Studies in 16th-Century English Literature); 3 hours in interdisciplinary coursework subject to the approval of the Strode committee; 3 hours of a Renaissance seminar; 3 hours in the Shakespeare in Performance Practicum (a course offered every other spring, in years when there is not a Strode seminar); and 3 hours of composition pedagogy (EN 532 Approaches to Teaching Composition). Each student pursuing this concentration must also take 3 courses at the 600 level. A student writing a thesis (Plan I) will take 6 thesis hours (EN 599) and in consultation with the director of the Strode Program, drop 3 hours of coursework from his or her Renaissance concentration.

Degree requirements for the MA in English with a concentration in Composition, Rhetoric, and English Studies (CRES). Students admitted as candidates for the master of arts in English with a concentration in composition-rhetoric are required to take the following for a total of 30-32 hours: 3 hours in bibliography and research (EN 537: Introduction to Graduate Studies); 3 hours of writing workshop (EN 538: Research and Critical Prose Workshop); 3 hours in EN 620 or other linguistics; 3 hours in EN 532: Approaches to Teaching Composition; 3 hours in history of composition-rhetoric (EN 638: History of Rhetoric-Composition Part I or EN 658: History of Rhetoric-Composition Part II); 3 hours in EN 512: Computers and Writing; 12 hours in approved general electives; and (for teaching assistants) 2 hours in teaching practicum (EN 533/534). Students must take at least three courses at the 600-level. A student writing a thesis (Plan I) will take 6 thesis hours (EN 599) and in consultation with the field advisor, drop 6 hours of coursework from his or her concentration. A student not writing a thesis (Plan II) will satisfy the graduation requirement by completing EN 538 with an oral defense of the paper generated in that course.

Master's comprehensive written exam. The master's comprehensive written exam is designed to be a “capstone experience” for the student. During the third semester of the program (fall semester of the second year), each student must propose four questions based on his or her coursework, along with a list of courses taken and papers written for them, to the MA Exam Committee. The committee, composed of the Graduate Faculty, will rewrite the questions for each student for the exam, which will be scheduled immediately after spring break in the student's final semester of the program. The student will choose two of the four questions and devote one and a half hours to each question. Exams will be expected to display a fluent and grammatically correct prose, organizational cogency making for clarity of presentation, an ability to analyze texts impressively, and a certain conceptual sophistication in framing arguments. The exams will be graded as Distinction, Pass, or Fail. A student will be allowed to retake the exam before the end of the semester in the event of a failure.

Foreign language requirement. A reading knowledge of one foreign language is required. The foreign language requirement may be satisfied by one of the following: (a) the certification through the appropriate department of a "B" average or the equivalent of two years of undergraduate- or graduate-level study in a single foreign language, completed within five years of admission to the master's program; or (b) passing the foreign language reading examination prepared by the Department of Modern Languages and Classics; or (c) completing a specially-designed two course sequence (Fall + Spring) in either French, Spanish, or German, for the purpose of reading comprehension. Students who are not native speakers of English may use their native language to fulfill this requirement. Students may petition their program director and/or the Graduate Studies Director for exceptions to these guidelines.

http://graduate.ua.edu/catalog/15900.html
Requirements for the MA in Teaching English to Speakers of Other Languages (Applied Linguistics/TESOL) Degree

Admission Requirements
A candidate for admission to the MA-TESOL degree program must satisfy the minimum conditions for regular admission to the Graduate School (including a grade point average of 3.0 overall and an acceptable score on the general test of the Graduate Record Examination). Each applicant must also submit a sample of his or her academic writing. In addition, those who are not native speakers of English must submit a TOEFL score of at least 100 (iBT) or 600 (PBT); and must submit an audiotape demonstrating their speaking proficiency in English. For those who took the PBT TOEFL, scores on the Test of Spoken English (TSE) and Test of Written English (TWE) are also desirable as part of the application. Students may be required to take appropriate courses in speaking and writing at the English Language Institute. Application materials should be received by January 2 to ensure full consideration for admission for the following fall term; applications received after January 2 will be reviewed for admission, but they may not meet the deadlines for fellowship or assistantship consideration.

Degree Requirements
Students will be required to complete 30 semester hours for the degree: 24 hours of required courses and 6 hours of department-approved electives or of thesis research.

Students will be required to pass a comprehensive examination at the end of their coursework; the examination is normally given once a year, in February. The examination will cover all the major areas of study.

An optional thesis may be written under the guidance of the TESOL faculty. Please see the Graduate School’s general requirements for the master's thesis, outlined under Degree Requirements earlier in this catalog.

To earn the degree, native speakers of English must demonstrate proficiency in a second language; students whose native language is not English must demonstrate satisfactory proficiency in spoken and written English.

For further details about the program, visit the departmental website and contact the coordinator of the Applied Linguistics/TESOL program.

Requirements for the MFA Degree in Creative Writing
The program leading to the master of fine arts (MFA) degree in creative writing is a studio/academic course of study. Imaginative writers enroll in writing workshops, forms courses, and literature classes, gaining exposure to a broad range of writing models and experimenting with a variety of strategies and forms. Guided development of each writer's talents culminates in a complete, carefully conceived final project (the thesis), typically a book-length manuscript. The program can be completed in three intensive years; a fourth year of study, in which work on the final project is the central activity, may be elected. All admitted MFA students receive support in the form of graduate teaching assistantships or fellowships. Support is available for up to four years, subject to satisfactory performance.

Admission Requirements
Applicants to the MFA program in creative writing must apply to the Graduate School for admission to the Department of English. To apply, connect to the Graduate School site at http://graduate.ua.edu/applicants.html. Follow the online instructions, complete the required forms, and have official transcripts sent to the Graduate School. The GRE general test is recommended but not required.

Applicants must also mail, in one envelope, to Director, Program in Creative Writing, Department of English, Box 870244, University of Alabama, Tuscaloosa, AL 35487-0244, the following: an MFA Program Applicant Coversheet, a writing sample, three letters of recommendation, a statement of purpose, and copies of undergraduate transcripts.
Application materials should be received by December 31 to ensure full consideration for admission for the following fall term. The MFA applicant cover sheet and further information is available at http://www.as.ua.edu/english/08_cw/apply.html

Writing samples should include a maximum of 20 pages of prose, or 10-20 pages of poetry, or a substantial sampling of work in several forms.

**Degree Requirements**

Candidates for the MFA degree are required to spend a minimum of two semesters in residence and to complete 42 hours of graduate-level coursework and 6 hours of thesis direction (EN 699), distributed as follows. Half of all coursework must be at the 600 level.

- 24 hours in 600-level writing workshops and/or forms courses from among EN 601, EN 603, EN 605, and EN 608. (Sample topics include Poetry Workshop, Fiction Workshop, Creative Nonfiction Workshop, Forms of Poetry, The Uses of History, Comedy, The Prose Poem and Short Short Story, Classical Literature for Contemporary Writers, Collaboration, Reiteration, Research Methods in Creative Nonfiction)
- 3 hours in EN 609: Writers at Work: Form. Theory. Practice. (Sample topics for this 1-hour course: Profession of Authorship, Teaching Creative Writing, Writing Internship, Publishing: A Brief History, Aspects of Performance, Magazine Scene, Creative Criticism)
- 12 hours in literature, criticism, or linguistics courses in the Department of English at the 500 or 600 level
- 3 hours in any elective course at the 500 or 600 level (in English or any other university department)
- 6 hours in EN 699 (thesis preparation)

**Final Project.** A thesis, typically a book-length manuscript, is prepared in consultation with a thesis advisor, usually a member of the resident creative writing faculty. The candidate for the MFA is examined on his or her thesis by a committee of four faculty members (including the thesis advisor): three total from the Department of English and one graduate faculty member from outside the department. Students also give a public reading from work produced while in residence; this reading fulfills the comprehensive exam requirement.

**Requirements for the PhD Degree in English**

In addition to the Graduate School’s general requirements for the PhD degree, the Department of English has the following specific requirements:

**Admission.** Applicants for admission to the PhD program in English are required to take the general test and the written test of the Graduate Record Examination. Each applicant must submit a sample of his or her critical writing (normally an essay of some 20 pages written for a course, or a portion of a master's thesis) and must normally have a grade point average of 3.5 or better for his or her master's courses or equivalent graduate work. Application materials should be received by January 2 to ensure full consideration for admission for the following fall term; applications received after January 2 will be reviewed for admission, but they may not meet the deadlines for fellowship or assistantship consideration.

**Courses.** There is a minimum requirement of 30 hours beyond the master's degree (earned here or elsewhere), of which no more than 15 hours can be at the 500 level. To meet University requirements, doctoral students must have 48 credit hours. This means that 18 credit hours earned at the master's level must be formally transferred and applied to the requirements for the doctoral degree. Only credit earned during the six-year period preceding admission to the doctoral program may be considered for transfer. If a student's master's degree is more than six years old at admission, therefore, that student may have to complete up to 18 additional hours of coursework. (See the **Transfer of Credit** section for doctoral degrees under **Degree Requirements** in this catalog.) Doctoral students whose work at the master's level does not meet the course distribution requirements of the department's MA program (see **Requirements for the MA Degree in English**) may be required to complete those distribution requirements with courses taken toward the PhD in addition to their regular coursework. Twenty-four hours of dissertation research are also required.
To be admitted formally to candidacy for the PhD degree, all students must receive a pass in EN 637 Workshop in Academic Writing, which will normally be taken in the final year of coursework.

**Foreign languages.** The foreign language requirement may be satisfied by one of the following options (with the understanding that students may petition their program director and/or the Graduate Studies Director for exceptions to these guidelines):

**A reading knowledge of two foreign languages:** This reading knowledge can be demonstrated by either of the following: (a) the certification of at least a "B" average or the equivalent in two years of study of a single foreign language completed, as either an undergraduate or graduate student, within five years of admission to the PhD program; or (b) passing the foreign language reading examination prepared by the Department of Modern Languages and Classics; or (c) completing a specially-designed two course sequence (Fall + Spring) in either French, Spanish, or German, for the purpose of reading comprehension. The language used to satisfy the MA language requirement—whether gained here or at another school—can satisfy one of the languages required for the PhD program. Students who are not native speakers of English may use their native language as one of the two required languages.

**Advanced proficiency in one foreign language:** Advanced proficiency can be demonstrated by (a) an undergraduate major in the language completed within five years of admission to the PhD program; (b) the certification of at least a "B" in two advanced literature courses (300-level or higher) taught in the foreign language. Students who are not native speakers of English may use their native language to fulfill this requirement.

**Preliminary examination.** After finishing coursework, the student must apply to the Graduate School for Admission to Candidacy for the Doctoral Degree. To meet this requirement, each student must pass a written preliminary examination, and engage with his or her dissertation committee in a one-hour conference concerning the dissertation prospectus. The written preliminary examination will be given at a date agreed upon by the student and his or her examination committee in consultation with the director of graduate studies. The oral conference concerning the dissertation prospectus can be scheduled after the student passes the written examination, when the student and dissertation director agree that the prospectus is ready (date to be arranged by the student in consultation with the graduate studies director and the dissertation committee). The examination and conference will be governed by the following guidelines:

**A. Written preliminary examination (see specific procedures for rhetoric and composition):** The written preliminary examination will be of two to four hours in duration in the field or genre of the dissertation. The examination committee will consist of three faculty members from the English department chosen by the student for their expertise in the field. The precise nature of the examination—its length, the type and number of the questions to be asked and answered—will be negotiated between the student and the committee. The fields and genres from which students normally choose the examination specialty include the following:

**Fields:** Old and Middle English, Renaissance (including Shakespeare), 17th century, Restoration/18th century, 19th-century British, modern British, early American, late American, rhetoric and composition.

**Genres:** drama, fiction, poetry, intellectual prose, literary theory (e.g., deconstruction, new criticism, new historicism, psychoanalytical criticism).

At the beginning of the semester prior to the semester in which the written preliminary examination is to be taken, the student—working with his or her committee—will formulate a reading list of 30–40 works from which questions will be drawn.

The purpose of the written preliminary examination is to demonstrate competence in the student's area of specialization.
Students who fail the written preliminary examination may take it a second time. Students who fail the examination a second time will not be allowed to continue doctoral work.

**B. Dissertation prospectus conference and dissertation defense:** The conference concerning the dissertation prospectus will be a one-hour discussion between the student and his or her dissertation committee. Generally, that committee will be composed of the dissertation director, plus three other graduate faculty members from the department and one graduate faculty member from outside the department.

The conference will focus on both the soundness of the prospectus and the student's readiness to undertake the research and writing of the dissertation. The purpose of the conference is to help the student begin the writing of the dissertation, to identify areas of potential difficulty, and to prepare the student for the project that lies ahead.

Once the written preliminary examination has been passed and the dissertation prospectus conference completed, the student and his or her dissertation committee must complete an application to candidacy and submit it to the Graduate School. The graduate studies director will notify the Graduate School that the written preliminary examination has been passed and the dissertation prospectus conference completed.

Once the prospectus conference is completed, then the student may proceed to the dissertation. The dissertation defense consists of an oral defense of the dissertation before four English department graduate faculty members (including the director) and an external graduate faculty member. Normally, the members of this committee are those faculty members who formed the dissertation prospectus conference committee. They will be appointed by the director of graduate studies in consultation with the student, who will have a clear understanding with the faculty members involved of whether they will be able to read the dissertation and conduct the final oral examination during summer months or during sabbatical leave if necessary. Faculty members have the prerogative to serve on a committee when they are not teaching; it is the student’s responsibility to schedule investigation, writing, and examination in time periods acceptable to members of the committee. All five members of the dissertation committee must have time to read and analyze the dissertation before the oral examination on the dissertation; final approval of the dissertation must be received at least six weeks before graduation.

Teaching experience. All candidates for the PhD degree are required to have college or university teaching experience in English composition or literature before they graduate. Teaching assistants in all programs must enroll in EN 532 Approaches to Teaching Composition, unless they have taken the course or its equivalent previously. They must also complete the summer practicum before their first semester of service and enroll in EN 533 and EN 534 during their first year of teaching service.

**Admission to the doctoral program with a BA degree.** Those who wish to apply for admission directly to the doctoral program after completing a BA in English must have shown superior aptitude for English at the undergraduate level and satisfy the Graduate School’s normal requirements for admission.

The PhD (except for CRES; see below) consists of 48 hours of coursework. Twenty-four of those hours are required. The first 24 hours must be satisfied by coursework specified below in section A. While completing those 24 hours, the student will be given an oral examination, passage of which determines whether the student continues in the program.

**A. The first 24 hours:** 3 hours in bibliography and research (EN 537 Introduction to Graduate Studies, which is normally offered every fall and which students are encouraged to take in the first semester, for maximum benefit); 3 hours of critical theory (EN 535 Literary Criticism, EN 536 Advanced Modern Criticism, or EN 635 Seminar in Literary Criticism); and 3 hours of composition pedagogy (EN 532 Approaches to Teaching Composition).

See description above for the comprehensive written exam.
**B. The second 24 hours:** These hours will consist of elective courses, except for EN 637 Workshop in Academic Writing. To be formally admitted to candidacy for the PhD degree, all students must receive a pass in this course, which will normally be taken in the final year of coursework.

**C. Other requirements:** Of the 48 hours taken, 24 must be at the 600 level. The foreign language requirements, written and oral preliminary examination requirements, dissertation and dissertation research hour requirements are the same as those for students who enter the program with master's degrees.

**CRES (Composition, Rhetoric, and English Studies) Degree Requirements.** The CRES PhD Specialization requires 48 hours of coursework, 24 dissertation hours, 2 hours of teaching practicum (for teaching assistants), and successful completion of the written and oral components of the CRES exam. Students who have prior graduate degrees or coursework may transfer up to 18 hours.

**A. The CRES curriculum:** CRES students must take 12 hours of core English requirements: 3 hours in EN 537: Introduction to Graduate Studies, 3 hours of critical theory (normally EN 535, 536, or 635), 3 hours in EN 538: Research & Critical Prose Workshop, and 3 hours in EN 637: Workshop in Academic Writing. Students must take 15 hours in core CRES requirements: 3 hours in EN 532: Approaches to Teaching Composition, 3 hours in EN 652: Thoeries of Teaching Composition, 3 hours in EN 653: Composition-Rhetoric Research Methodology, 3 hours in the history of composition-rhetoric (EN 638 or EN 658), and 3 additional hours in either EN 512: Computers and Writing or an additional history (EN 638 or EN 658). Students will take 9 hours in CRES electives, 9 hours in approved general electives, and 3 hours in linguistics (EN 620: English Linguistics or other). Students who have a teaching assistantship will take EN 533 and EN 534.

**B. The CRES preliminary examination.** A doctoral student wishing to write a dissertation in CRES must pass both the written and oral components of the preliminary examination. The written preliminary examination for candidates in CRES will be four hours in duration and will require candidates to respond to two of four topics prepared according to the guidelines available in the office of the CRES director.

If the candidate passes the written preliminary examination, the CRES faculty will conduct an oral examination of the candidate at the first convenient opportunity for both the candidate and the faculty. For the oral examination, the candidate will be responsible for material from all four topics—the two not covered on the written examinations as well as the two that were. Candidates intending to write a dissertation in composition studies must pass the oral examination. Students who fail the written preliminary examination may take it a second time. Students who fail the examination a second time will not be allowed to finish doctoral work.

**C. CRES dissertation and prospectus defense.** CRES students who have passed the preliminary examination are free to form a dissertation committee consisting of a director from the CRES faculty, three other faculty members of the English department, and a faculty member from outside the department. The candidate’s dissertation prospectus must be approved by his or her dissertation committee and then defended in an oral examination conducted by this same committee. (For more information, see the description for the dissertation and prospectus under the general PhD requirements above).

**D. Other requirements:** Of the 48 hours taken, 24 must be at the 600 level. The foreign language requirements, written and oral preliminary examination requirements, dissertation and dissertation research hour requirements are the same for students who enter with a BA and those who enter with master’s degrees.

**Graduate Credit for 500-Level Courses**
Graduate students enrolled in 500-level courses that are also offered at the 400 level are expected to perform extra work of an appropriate nature. Graduate credit will not be granted at the 400 level.

**Time Limit for All Degrees**
All requirements for the MA, MA in Applied Linguistics / TESOL, and MFA degrees must be completed within six years. The PhD degree must be completed within seven years from the time of admission to the doctoral program. Students enrolling in the BA to PhD program have eight years in which to complete their degrees.

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**Course Descriptions**

**EN 500 Special Topics.** Three hours.

**EN 501 Fiction Writing.** Three hours.
Enrollment limited to MFA students; other graduate students admitted on the basis of portfolios (see creative writing director during advising period). Focus will be a discussion of original student writing; other reading and writing may be assigned. Offered spring semester.

**EN 503 Poetry Writing.** Three hours.
Enrollment limited to MFA students; other graduate students admitted on the basis of portfolios (see creative writing director during advising period). Focus will be a discussion of original student writing; other reading and writing may be assigned. Offered fall semester.

**EN 509 Writing for Film.** Three hours.
An introduction to the craft of writing for film and television.

**EN 510 Nonfiction Writing.** Three hours.
Focus will be a discussion of original student writing; other reading and writing may be assigned. An introduction to the variety of nonfiction forms including memoir, reportage, the essay, travel writing, reviewing, and the interview.

**EN 511 Writing: Special Topics.** Three hours.
Enrollment limited to MFA students; other graduate students admitted on the basis of portfolios (see creative writing director during advising period). Focus will be a discussion of original student writing; other reading and writing may be assigned. Sample topics: hypertext; the prose poem.

**EN 512 Computers and Writing.** Three hours.
A survey of how computers can be used to help students improve their writing and to help teachers improve their writing instruction.

**EN 520 The Development of English Grammar.** Three hours.
A coherent examination of the changing methods and theories for describing the English language. A desirable prerequisite for this course is EN 320 or EN 321.

**EN 523 History of the English Language.** Three hours.
An introduction to the external history of the English language along with the study of the accompanying internal changes in structure. A desirable prerequisite for this course is EN 320 or EN 321.

**EN 524 The Structure of English.** Three hours.
An intensive investigation of the structures in the English language, including phonology, morphology, syntax, and semantics. A desirable prerequisite for this course is EN 320 or EN 321.

**EN 525 Dialectology.** Three hours.
The study of the experience of the English language in America, with particular emphasis on its development and dialects. A desirable prerequisite for this course is EN 320 or EN 321.
EN 528 Directed Readings Abroad. One to three hours.
Designed for graduate students who wish to take an independent studies course during international summer programs. Reading list and requirements will be negotiated between student and faculty member. No more than three credits can be counted toward a degree program.

EN 529 Directed Readings. One to three hours.
By arrangement.

EN 530 Feminist Theory (same as WS 530). Three hours.

EN 532 Approaches to Teaching Composition. Three hours.
A study of the basic pedagogical approaches to teaching expository writing in secondary and higher education, along with examination of traditional conventions as well as innovative pedagogical approaches used in such instruction. Work with course goals, objectives, and writing outcomes, syllabus and writing assignment construction, training in assessing student writing. Required of all graduate assistants in English.

EN 533 Practicum in Teaching College English 101. One hour.
Fall semester only. Required of all graduate assistants teaching EN 101 for the first time. Training in reaching EN 101 course goals and writing outcomes. Please note: EN 533 begins with a required one-week orientation session immediately prior to the start of the fall semester. Orientation attendance is mandatory for retaining a graduate assistantship.

EN 534 Practicum in Teaching College English 102. One hour.
Spring semester only. Required of all graduate assistants teaching EN 102 for the first time. Training in reaching EN 102 course goals and writing outcomes. Further instruction in teaching formal argumentation and advanced research techniques.

EN 535 Literary Criticism. Three hours.
A study of selected major critics and critical trends from the classical period into the 20th century.

EN 536 Advanced Modern Criticism. Three hours.
A study of 20th-century literary criticism, with attention both to selected major critics and to contemporary critical trends and movements.

EN 537 Introduction to Graduate Studies. Three hours.
A study of selected bibliographical resources and of some of the important method approaches employed in literary study, including an introduction to critical approaches, scholarly writing, and issues in the profession.


EN 600 Special Topics Seminar in British Literature. Three hours.
A recent topic was Joyce and his contemporaries.

EN 601 Fiction Workshop. Three hours.
Enrollment limited to students with approved portfolios (approval secured upon admission to the MFA program or during advising period—see creative writing director). Focus will be discussion of original student writing; other reading and writing may be assigned.

EN 603 Poetry Workshop. Three hours.
Enrollment limited to students with approved portfolios (approval secured upon admission to the MFA program or during advising period—see creative writing director). Focus will be discussion of original student writing; other reading and writing may be assigned.

EN 605 Writing Workshop: Special Topics. Three hours.
Enrollment limited to students with approved portfolios (approval secured upon admission to
the MFA program or during advising period—see creative writing director). Focus will be
discussion of original student writing; other reading and writing may be assigned.

**EN 608 Forms: Special Topics.*** Three hours.
Through readings of primary works and theory by writers in a particular genre or form, this
course examines the traditional and contemporary practice of that genre's aesthetics. Sample
topics: Prosody, Short Short Fiction and the Prose Poem, Characterization Across Genres.

**EN 609 Writers at Work: Form. Theory. Practice.*** One hour.
Short course in specialized topic of interest to creative writers. Sample topics: Teaching
Creative Writing, Profession of Authorship, Writing Internship, Publishing: A Brief History,
Poetry and Dance, Episodic Form.

**EN 610 Methods in TESOL.*** Three hours.
A detailed account of language teaching approaches and methods according to their
underlying theories of language and language learning.

**EN 612 Topics in Applied Linguistics.*** Three hours.
Rotating topics in applied linguistics.

**EN 613 Second Language Development.*** Three hours.
A study of psycholinguistic, sociolinguistic, neurolinguistic, and other approaches to
understanding how people develop skill in a second language.

**EN 617 Teaching Academic Language Skills to Non-Native English Speakers.*** Three
hours.
A course focusing on the teaching of academic writing skills in the context of an American
university.

**EN 618 Language in Cultural Context.*** Three hours.
A course focusing on language learning and use in cultural context.

**EN 620 English Linguistics.*** Three hours.
An advanced introductory linguistics course that focuses on the English language and which
has relevance for students in the applied linguistics/TESOL, literature, rhetoric and
composition, and MFA programs.

**EN 622 Old English.*** Three hours.
Study of the language and reading of representative prose and poetry.

**EN 625 Seminar in English Linguistics.*** Three hours.
The application of specific linguistic techniques to a variety of problems in the description of
the English language; the course has a different focus each time it is taught.

**EN 627 Seminar in the History of the English Language.*** Three hours.
The close analysis of diachronic issues in the English language; a different set of issues is
explored each semester the course is taught.

**EN 630 Directed Readings.*** One to three hours.
By arrangement.

**EN 631 Classical Backgrounds of English Literature.*** Three hours.
An analytical study of selections from ancient Greek, Roman, and Hebrew literature, with
special emphasis on its influence upon English and American authors.

**EN 635 Seminar in Literary Criticism.*** Three hours.
Intensive study in the writings of one critic or exploration of a topic involving works by several
critics. Recent topics have included feminist criticism and psychoanalytic criticism.

**EN 637 Workshop in Academic Writing.*** Three hours.
A writing workshop normally taken in the student's final year of coursework. To pass this
course, the doctoral student will be required to revise a paper and submit it for publication.

**EN 638 History of Rhetoric and Composition I: Ancient Greece to the Renaissance.** Three hours. This seminar covers rhetorical texts from ancient Greece to the Renaissance, particularly texts having influence on today’s field of composition.

**EN 639 Seminar in Special Topics in Rhetoric and Composition.** Three hours. Topics to be proposed by faculty each semester. Typical topics include literacy theory, theoretical perspectives on basic writers, and computers and literacy.

**EN 640 Special Topics Seminar in American Literature.** Three hours. Recent topics have included "American Madness: the Literary Figurations of Unreason"; and Thoreau, Dickinson, and related contemporary writings.

**EN 641 Seminar in American Literature before 1850.** Three hours. Intensive literary and historical study of writing by one or more American authors. A recent topic was the making, recording, and remaking of history in 19th-century American literature.

**EN 642 Seminar in American Literature, 1850–1900.** Three hours. Intensive literary and historical study of writing by one or more American authors. A recent topic was the mythologizing of Mark Twain.

**EN 643 Seminar in 20th-Century American Literature.** Three hours. Intensive literary and historical study of writing by one or more American authors. Recent topics have included the American 1960s and Hemingway.

**EN 644 Seminar in Southern Literature.** Three hours. An intensive look at a major aspect of Southern American drama, poetry, and/or prose. Recent topics have included a study of race and gender in writings of Southern women; Faulkner and his legacy; and Tennessee Williams.

**EN 648 Seminar in African-American Literature.** Three hours. A critical exploration of African-American literature—culturally, historically, politically, and aesthetically—with efforts to define and contextualize the African-American experience.

**EN 651 Politics and Writing Pedagogy.** Three hours. An introduction to the theories and practices of pedagogical politics as they impact teaching, learning, and power relations in the composition classroom.

**EN 652 Theories of Teaching Composition.** Three hours. A survey of major theories in composition studies, exploring philosophical underpinnings and major issues in the field.

**EN 653 Composition/Rhetoric Research Methodology.** Three hours. The study of empirical research methods as well as practice using methodological frameworks employed in composition/rhetoric research reports and designs.

**EN 654 Seminar in Visual and Digital Rhetoric.** Three hours. This seminar focuses on understanding what rhetoric is and how to identify it in visual and digital "texts." It explores how to use rhetoric as a pedagogical tool for incorporating visual elements into composition classes.

**EN 658 History of Rhetoric and Composition II: The Renaissance to the Postmodern Era.** Three hours. This seminar covers rhetorical texts from the Renaissance to the Postmodern era, particularly texts having influence on today’s field of composition.

**EN 659 Writing Program Administration.** Three hours. Introduction to the intellectual work of Writing Program Administration, including methodologies, rhetorical strategies, and analytic tools used in running a Writing Program.
EN 660 Seminar in Old English Literature. Three hours.
Prerequisite: EN 622 Old English.
Intensive study of Old English literature and culture. Recent topics have included Beowulf and contemporary criticism.

EN 661 Chaucer. Three hours. The Canterbury Tales, Troilus and Criseyde, and selected minor poems. Includes advanced study of Chaucer's language and the 14th-century milieu.

EN 662 Middle English Literature Exclusive of Chaucer. Three hours.
A survey of the period with emphasis on types of literature, allegory, and satire. The opinions and attitudes of the Middle Ages are examined.

EN 665 Seminar in Renaissance Literature I. Three hours.
Recent topics have included Elizabethan drama and friendship in Renaissance literature.

EN 666 Seminar in Renaissance Literature II. Three hours.
Recent topics have included Jacobean and Caroline drama and Shakespearean tragedy.

EN 667 Shakespeare in Performance Practicum. Three hours.
Shakespeare wrote his plays to be performed, and this course investigates conditions and implications of performance on stage and in film, present and past.

EN 668 Seminar in Renaissance Literature III. Three hours.
Recent topics have included John Donne's poetry and mourning and the elegy.

EN 669 Strode Seminar in the Age of Shakespeare. Three hours.
This seminar is based around part-time residence of distinguished faculty from other universities. Recent topics have included constructing gender and Milton and Shakespeare in literary history.

EN 673 Seminar in Restoration Literature. Three hours.
An analytical study of a major aspect of the literature of Britain between 1660 and 1700. Emphasis varies; a recent topic was "The Romance of Conquest."

EN 674 Seminar in 18th-Century British Literature. Three hours.
Emphasis is on a major figure (Fielding, Pope, Swift) and/or groups of writers (The Age of Johnson) and/or form (the novel, biography, drama). Specific topics are announced prior to registration.

EN 683 Seminar in Romantic Literature. Three hours.
Intensive study of English Romantic poetry and prose. Recent topics have included Wordsworth and Coleridge, and the Shelley circle.

EN 685 Seminar in Victorian Literature. Three hours.
Intensive study of Victorian literature. Recent topics have included Browning and Hopkins, and "Anatomies of Pleasure and Pain."

EN 690 Seminar in Modern British Literature. Three hours.
A study of some major aspect or aspects of the literature from 1890 to 1945. Recent topics have included Modernism; Woolf, psychoanalysis, and feminism; and Dylan Thomas, D. H. Lawrence, and Ted Hughes.

EN 691 Seminar in Contemporary British Writing. Three hours.
Investigation of issues in British writing from 1945 to the present. A recent topic was "Representing Africa."

EN 698 Research Not Related to Dissertation (MFA/PhD). Variable credit.

EN 699 Dissertation Research (MFA/PhD). Variable credit. (Three-hour minimum enrollment required for PhD students.)
The Department of Gender and Race Studies (called Women's Studies until November 2009) offers a course of study leading to the master of arts degree in Women's Studies. The MA in Women's Studies is designed to support feminist research. The program emphasizes interdisciplinary and cross-cultural methodology. It provides a conceptual framework, analytical training, and bibliography and research tools for feminist studies. The program is designed for students from a variety of humanities and social science backgrounds with interest in gender studies and the status and roles of women in society, past and present.

Graduates of the MA program will have the skills to continue graduate work toward a PhD in a humanities or social science discipline. Training in feminist studies and research methods will also enable graduates of the MA program to enhance their work in other careers, such as law, health care, criminology, social work, public welfare, and education.

Graduate work in Women's Studies and African American Studies is also available to students whose degree programs permit them to select courses in other programs and divisions. A master of arts concentration in Women's Studies may be taken through the Department of American Studies of the College of Arts and Sciences and through other cooperating departments and programs. Admission and programs of study are subject to the guidelines presented by the appropriate department or program.

Admission Requirements

The requirements for admission to the Graduate School are detailed in the Admission Criteria section of this catalog. All applicants to the Department of Gender and Race Studies must submit test scores from either the Graduate Record Examination or the Miller Analogies Test in support of the application. International students must submit results of the TOEFL as well. It is preferred that each applicant to the MA program have an undergraduate major or minor in Women's Studies, or the equivalent, and a major in a humanities or social science discipline. Each applicant should have a grade point average of at least 3.0 on a 4.0 scale and satisfy minimum requirements for admission to the Graduate School. Students with deficiencies in undergraduate preparation may be required to take additional credit hours. Financial assistance is available in the form of research/teaching assistantships and fellowships for qualified students. Applicants who wish to be considered for research or teaching assistantships or fellowships should file their applications by February 15.

Degree Requirements for the MA in Women's Studies

Students must meet all requirements in the Degree Requirements section of this catalog.

Students complete a minimum of at least 30 hours in courses numbered 500 or above. All MA students will successfully complete a 9-hour core program consisting of WS 530 Feminist Theory: Contemporary or WS 535 Black Feminism; WS 532 Issues and Problems in Women's Studies Research; and WS 570 Gender, Race, and Class: Cross-Cultural Approaches. Students have the option of writing a thesis (Plan I) or passing a comprehensive exam described below (Plan II). A grade of "B" or better must be earned in all courses.

Plan I (thesis plan) requires at least 30 hours of coursework which will include 9 hours of core courses, 15 hours of elective courses, and 6 hours of thesis research. Students must submit a proposal before writing the thesis and defend the thesis before a committee of three graduate faculty, including at least one from outside the department.

Plan II (comprehensive exam) requires 30 hours of coursework which will include 9 hours of core courses and a comprehensive exam. The master’s comprehensive exam is an oral
defense of a portfolio of three exemplary research papers written during the student’s program. The papers should be selected by the student and be prefaced by an original 10-page essay introducing the portfolio. The 10-page preface should explain how the three are reflective of the student's program of study. To pass the exam, the student will defend the portfolio and preface before a three-member graduate faculty committee.

**Core course requirement**
- WS 530 Feminist Theory: Contemporary or WS 535 Black Feminism 3
- WS 532 Issues and Problems in Gender and Race Studies Research 3
- WS 570 Gender, Race, and Class: Cross-Cultural Approaches 3

**Additional requirements**
- WS 599 Thesis Research 6
- WS Elective 3
- Electives (departmentally approved) 12

**Course Descriptions**

**WS 500: Independent Study in Gender and Race Studies.** One to six hours. Independent study on any subject pertaining to women. Projects are conducted under the supervision of a professor in the chosen field and must be approved in advance by the program director.

**WS 503: Seminar in Teaching Gender and Race Studies.** Three hours. The student attends a section of WS 200 and works with one group. Meetings with other discussion leaders and supervisors are required in addition to written work.

**WS 510 Special Topics.** Three hours. Seminar format. The course offers an interdisciplinary approach to topics, which vary by semester. Active student engagement, such as conducting an interview, is required. Sample topic: women in the world.

**WS 520 Women and Work.** Three hours. A study of women and various work relationships, through autobiographies of working women, novels, and essays.

**WS 521 Gender and Race Studies Practicum.** Three hours. The class meets for seven weeks to discuss theoretical and methodological issues concerning contemporary women, in preparation for an eight-week internship with either an organization or individual in the community.

**WS 525 Feminist Theory: Major Texts.** Three hours. Seminar consists of close readings in feminist theory, with an emphasis on primary texts. Intellectual, cultural, and political theory.

**WS 530 Feminist Theory: Contemporary.** Three hours. Considers major economic, social, psychological, and philosophical approaches to the study of women. Emphasis is on the formulation of theories and mastery of primary works in the field.

**WS 532 Issues and Problems in Gender and Race Studies Research.** Three hours. This seminar focuses on interdisciplinary research and problems in methodology in Gender and Race Studies.

**WS 535 Black Feminism.** Three hours. This seminar exposes students to the key figures, texts, and concepts that constitute Black feminist thought.

**WS 540/WS 541 Seminar in Gender and Race Studies.** Three hours. Topics vary each semester. Graduate students are required to conduct original research. The
courses focus on such topics as language and gender, Southern women's culture.

**WS 550 Women in America.** Three hours.
The cultural roles and experiences of American women; how they have been perceived and how they have perceived themselves within American life.

**WS 560 Women and Public Policy.** Three hours.
The systematic analysis of public policy formation at the federal, state, and local levels as it relates to the status of women. Strategies for change and the impact of the women's movement are examined. Team and individual research projects.

**WS 570 Gender, Race, and Class: Cross-Cultural Approaches.** Three hours.
Prerequisite: WS 530, WS 532, WS 535 or equivalent.
The major focus of this seminar is a cross-cultural approach to the study of gender, race, and class. Emphasis is placed on theories of and research on gender, race, and class.

**WS 590 Women and Law.** Three hours.
This seminar's major focus is the impact of the law on the status and lives of women.

**WS 592 Women in the Labor Force.** Three hours.
The historic and demographic changes of women's labor force participation from colonial times to the present, and the economic and social impact of their changing work roles.

**WS 594 Sex Discrimination.** Three hours.
This seminar is designed to survey sex discrimination law and issues related to marriage and family life, employment, and educational opportunity.

**WS 599 Thesis Research.** Three to six hours.
The focus of this research may involve traditional or community-related research on the student's approved thesis topic in Gender and Race Studies.

**WS 635 Seminar in Feminist Literary Criticism.** Three hours.
Intensive study in the writings of one critic, or exploration of the theory and practice of feminist criticism involving works by several critics. This course is the same as EN 635 Seminar in Literary Criticism, when its subject is feminist literary criticism.
The department offers a program leading to the master of science degree in geography. Study in geography prepares students to work in a broad range of positions related to foreign area analysis, land-use management, planning, urban and economic development, environmental analysis, and geographic information techniques including computer cartography, geographic information systems, and remote sensing. These positions are found in federal, state, and local governments, as well as in private industry. Among several close associations with other disciplines, the graduate program in geography has traditionally been closely related to regional and urban planning. The program has assisted various city and regional planning agencies throughout the state, providing expertise in computer graphics, geographic information systems, remote sensing, land-use planning, redistricting, and urban-industrial location analysis.

Admission Requirements
Applicants must submit an acceptable score on the Graduate Record Examination in support of the application. General admission requirements are outlined in the Admission Criteria section of this catalog.

Degree Requirements
The graduate program in geography includes a thesis or a nonthesis option. Under both options, the student has considerable latitude to design a program to fit particular needs. All entering students must specify one of the two options during the second semester of academic work. Both options have prerequisite courses, including two introductory courses in physical geography, an introductory course in human geography, a course in world regional geography, a course in map interpretation, and a basic statistics course.

All graduate geography students are required to pass a comprehensive examination for admission to candidacy (after having taken a minimum of 18 hours of graduate-level courses). Additional information is in the Degree Requirements section of this catalog.

MS in Geography, Thesis Option
This option requires a total of 30 credit hours including 3 hours of program requirements and 6 hours for thesis research. A minimum of 12 credit hours must be taken from courses in one of the areas of concentration including physical geography; regional, environmental and urban planning; human geography; or geographical information sciences. The remaining 9 credit hours may consist of courses from any of the other three areas of concentration and/or be selected from related courses offered in other disciplines with departmental approval (up to 6 of the 9 credit hours). The thesis option may be selected on approval by the student’s program advisor.

MS in Applied Geography, Nonthesis Option
This option requires a total of 39 credit hours including 3 hours of program requirements and 3 hours for non-thesis research projects. Students selecting this option must take a minimum of 8 hours of geographic techniques, and may count up to 15 credit hours of such coursework towards their Master program. A minimum of 15 credit hours must be taken from courses in one of the areas of concentration including physical geography; regional, environmental and urban planning; human geography; or geographical information sciences. The remaining 10 credit hours may consist of courses from any of the other three areas of concentration, related courses in other disciplines with departmental approval (up to 6 of the 10 credit hours); and/or experiential courses (up to 3 of the 10 credit hours).
Course Descriptions

GY 500 Research Traditions and Methodology in Geography. Three hours. An investigation of the historical development of geography, including its changing philosophies and prominent contributors. Students are also introduced to various approaches for conducting research in geography and must develop a written research proposal in an area of their interest.

GY 502 Climatology. Three hours. Review of atmospheric processes as they relate to global and regional climate patterns in the boundary layers of the earth's environment.

GY 504 Physical Geography of the Southeastern United States. Three hours. A study of the physical landscapes in the southeastern United States. Emphasis is on the geological setting, geomorphic features, climate, soils, and vegetation, and the interrelationships of these conditions that shape the landscape in this region.

GY 505 Directed Research: Physical Geography. Variable credit.

GY 506 Directed Research: Human Geography. Variable credit.

GY 507 Boundary Layer Climates. Three hours. This course is designed to introduce the nature of the atmosphere near the ground and the interactions these processes have with the physical, biological, and human systems on Earth.

GY 512 Hydroclimatology. Three hours. Introduces the nature of the atmosphere near the ground and the interactions these processes have with the physical, biological, and human systems on Earth.

GY 520 Remote Sensing I. Four hours. Focuses on basic principles behind remote sensing physics, techniques, and technology and introduces new sensor systems and digital image processing. Major topics include electromagnetic radiation principles, airborne remote sensing, microwave remote sensing, satellite remote sensing, and digital image processing.

GY 523 Quantitative Methods. Three hours. This course introduces several quantitative methods used by geographers to analyze and interpret geographic data and solve geographic problems. Topics include: Data formatting and organization, descriptive statistics, sampling, hypothesis formulation and testing, and parametric and non-parametric statistical procedures through factor analysis.

GY 530 Introduction to Geographic Information Systems. Four hours. Introduces the basic concepts of GIS, including definition and components of GIS, spatial data structures, data sources, data input, manipulation and analysis, applications of GIS, and managing GIS.

GY 532 Special Research in Geography. Two to four hours.

GY 534 GIS Internship. Three to six hours. Individual work experience in GIS supervised by the staff of an off-campus agency.

GY 535 Remote Sensing II. Four hours. Focuses on the quantitative analysis of non-photographic remote sensor data, providing students with hands-on experience using a digital image processing software package. Topics include preprocessing, image enhancement, classification, digital change detection, and remote sensing and GIS.

GY 536 Advanced Geographic Information Systems. Four hours. Focuses on the analytical use of spatial information as well as GIS applications. Topics include spatial aspects of geographic information, attribute data structure, error and uncertainty,
spatial analysis theories, GIS modeling, and GIS design.

**GY 538 Application Issues in GIS.** Four hours.
Provides an in-depth discussion on various topics in the application and technical issues of geographic information systems.

**GY 540 Community Facilities Planning.** Three hours.
A study of concepts and processes that underlie (a) the provision of public goods and services and (b) the spatial organization of publicly owned facilities. Topics range from theory to practical methods of conflict resolution.

**GY 541 Land Use Regulations.** Three hours.
The course explores the legal standards by which land is regulated and controlled in the U.S. It is designed for students who wish to become actively involved or exposed to land management and the planning profession.

**GY 544 Field Studies in Africa.** Six hours.
Experiential learning course. It explores how different cultural groups in Africa relate to the natural environment.

**GY 552 Environmental Decision Making.** Three hours.
Designed to help students develop both the tools and the personal philosophy necessary to analyze and manage scarce resources. A review of current environmental topics is followed by a survey of different paradigms and techniques that contribute to environmental decision making.

**GY 553 Environment and Society.** Three hours.
Explores the linkages between the biophysical environmental and human social systems. Public-policy implications are viewed from a social science perspective.

**GY 558 Urban Analysis Planning.** Three hours.
A thorough examination of the literature in economics, political science, and sociology that is relevant to the geographical study of contemporary urban structure, power, and conflict.

**GY 560 Environmental Management.** Three hours.
Introduces students to the impact of humans on the planet and the patterns of human behavior necessary to preserve and manage the environment in a self-sustaining manner. Emphasis is on writing and speaking.

**GY 561 Social Impact Assessment.** Three hours.
Focuses on the theories, philosophies, and methodologies of assessing the social consequences of environmental change.

**GY 565 Regional Planning and Analysis.** Three hours.
Principles and processes of regional planning and the analytical methods appropriate for solving regional planning problems. Case studies and the role of the planner in the regional planning process are discussed.

**GY 566 Regional and Urban Transportation Systems.** Four hours.
Examines location and function of the multimodal North American transportation system, the urban transport planning process, and the political and environmental contexts of transport systems, including impacts of continued reliance on the automobile.

**GY 567 Topics in Global Environmental Change.** Three hours.
Review and discussion of natural and human-induced changes in the physical environment with emphasis on deforestation, changing land use, and recent climate change.

**GY 570 Special Studies in Geography.** Three hours.

**GY 572 Soil Science.** Four hours.
Introduction to the scientific study of soils. Covers soil physical properties, morphology,
development, classification, environmental functions and uses, and resource degradation.

**GY 574 Cartography Practicum.** Three to six hours.
Individual work experience in cartography supervised by the faculty and staff of the University.

**GY 575 Cartography Internship.** Three to six hours.
Individual work experience in cartography, supervised by the staff of an off-campus agency.

**GY 576 GIS Practicum.** Three to six hours.
Individual work experience in GIS supervised by the faculty and staff of the University.

**GY 578 Planning Practicum.** Three to six hours.
Individual work experience in planning supervised by the faculty and staff of the University.

**GY 579 Planning Internship.** Three to six hours.
Individual work experience in planning supervised by the staff of an off-campus planning agency.

**GY 586 Drainage Basin Dynamics.** Three hours.
An examination of the physical operation of drainage basins (watersheds), focusing on surface water hydrology, erosion, and sedimentation.

**GY 588 Planning and Government.** Three hours.
Examines the role of planning as a governmental function, and the legal means available to local governments to carry out this important function.

**GY 589 Forest Ecology and Vegetation Analysis.** Three hours.
A study of the relationship of trees to the environment, and the interrelationship of organisms that compose the forest community.

**GY 590 Internship.** Three hours.
Individual work experience with agency involved in geographical research, analysis, and reporting.

**GY 598 Nonthesis Research.** One to three hours.

**GY 599 Thesis Research.** One to twelve hours.
Admission Requirements
Admission to the graduate program in geology is competitive. Applicants must satisfy the minimum admission requirements established by the Graduate School. An applicant to the MS program is normally required to have a bachelor's degree in geology or a related discipline (e.g., chemistry, mathematics, physics, or geological engineering) and to have completed at least one year each of college-level calculus, chemistry, and physics. Applicants with degrees in disciplines other than geology or with ancillary background deficiencies may be required to complete certain undergraduate requirements. An applicant to the PhD program is normally required to have a master's degree; however, an applicant with exceptional credentials may be admitted directly into the PhD program.

Additional information is in the Admission Criteria section of this catalog.

Degree Requirements

Master of science. The MS program requires a minimum of 24 credit hours of coursework, participation in the graduate seminar (two semesters), and a thesis. A maximum of 3 credit hours of nonthesis research may be applied toward the 24-hour total. A thesis committee should be established by the end of the first semester of residence and a thesis project must be proposed by the end of the second semester of residence. Each MS candidate must pass a combined oral thesis defense and final examination. Additional information is given in the Department of Geological Sciences Graduate Handbook.

Doctor of philosophy. The PhD program requires a minimum of 48 hours of coursework beyond the baccalaureate degree (including a maximum of 24 credit hours of approved graduate-level coursework transferred from a master's program and a maximum of 12 hours of nonthesis or nondissertation research), participation in the graduate seminar (four semesters), and a dissertation. A dissertation committee should be established by the end of the first semester of residence and a dissertation project should be established by the end of the third semester of residence. Each PhD candidate must also pass an oral dissertation proposal, an oral preliminary examination (after completion of all coursework), and an oral dissertation defense. Additional information is given in the Department of Geological Sciences Graduate Handbook.

See the Degree Requirements section of this catalog for additional requirements that apply to all master's and doctoral degrees.

Course Descriptions

GEO 501 Climate Change. Three hours. Prerequisite: MATH 126 and PH 102 or permission of the instructor. Survey of the variability of global climate through geologic time and investigation of the mechanisms of change.

GEO 506 Hydrogeology. Three hours. Offered fall semester. Not open to students who have earned credit for GEO 406. Prerequisite: GEO 365 and GEO 367, or permission of the instructor. Introduction to groundwater hydrology, including the theory of groundwater flow, groundwater exploration, and groundwater contamination.

GEO 512 Sedimentary Petrology: Carbonates. Four hours. Two lectures, one laboratory. Prerequisite: GEO 210 or permission of the instructor. Offered according to demand. Study of the depositional and diagenetic history of carbonate rocks.

GEO 513 Sedimentary Petrology: Clastics. Four hours. Two lectures, one laboratory.
Prerequisite: GEO 210 or permission of the instructor. Offered according to demand. Study of the depositional and diagenetic history of clastic rocks.

**GEO 514 Advanced Igneous Petrology.** Three hours. Study of igneous processes, with emphasis on phase relations, geochemical evolution, and physicochemical conditions. Offered fall semester.

**GEO 515 Metamorphic Petrology.** Three hours. Offered according to demand. Study of metamorphic processes, types, textures, and petrogenesis and the use of metamorphic rocks for understanding tectonism.

**GEO 516 Volcanology.** Three hours. Offered according to demand. Not open to students who have earned credit for GEO 416. Rheologic properties of magmatic systems and application of these principles to the understanding of volcanic processes.

**GEO 521 Well-Log Analysis.** Three hours. Two lectures, one laboratory. Offered according to demand. Prerequisite: GEO 314 and GEO 367. Analysis and interpretation of geophysical log data, including resistivity, porosity, gamma, and other newly developed logs. Geologic uses of log data and shaly sand interpretation are also discussed.

**GEO 522 Sedimentary Basin Analysis.** Three hours. Offered according to demand. Prerequisite: GEO 365 or GEO 367. Examination of the evolution and development of sedimentary basins. Emphasis is on sedimentary, tectonic, and geochemical processes and their influence in petroleum generation, accumulation, and preservation.

**GEO 525 Advanced Topics in Geology.** One to Six credits. Offered according to demand. Advanced topics in the following areas: economic geology, geochemistry, geohydrology, geophysics, geomorphology, mineralogy, paleontology, petrology, sedimentation, stratigraphy, structural geology, and tectonics.

**GEO 530 Ore Deposits.** Three hours. Offered according to demand. Introduction to sedimentary, hydrothermal, metasomatic, and magmatic ore deposits, including geologic setting and genesis.

**GEO 534 Seminar in Tectonics.** One hour. Offered fall and spring semesters. Prerequisite: Permission of the instructor. Discussion of current research in Tectonics and related subjects. May be repeated for credit.

**GEO 535/GEO 536 Graduate Seminar in Geology.** One hour. Offered fall and spring semesters. Oral presentations on current geological topics.

**GEO 541 Applied Geophysics.** Three hours. Offered fall semester. Prerequisite: MATH 126 and PH 102:104 or equivalent. The use of physical measurements to infer subsurface structure. Includes seismic reflection and refraction profiling, gravity and magnetic anomalies, electric and electromagnetic prospecting, and borehole geophysics.

**GEO 542 Geodynamics.** Three hours. Offered Spring semester. Prerequisite: PH 102, PH 104, MATH 126, GEO 314, GEO 365, or permission of the instructor. Introduction to the structure of the earth’s interior and theory of plate tectonics. Quantitative analysis of the physical processes governing the formation of major tectonic and magmatic features on the earth. Emphasis is on understanding geodynamic processes in orogenic belts, volcanic arcs, intraplate magmatism, sedimentary basins, and continental extensional provinces.

**GEO 545 Multichannel Seismic Processing.** Four hours.
Prerequisite: Math 126 and PH 102:104.
Introduction to multi-channel seismic data acquisition, processing and interpretation. Includes
the theory of wave propagation, time series analysis, and filtering. Problem-based lab using
real-world data & examples.

**GEO 546 Scientific Computing.** Three hours.
Prerequisite: two 200 or 300 geoscience courses or by permission of the instructor. This
course covers a broad range of computational methods used in the geosciences. Topics
include data analysis, manipulation and image processing, using a variety of software
packages.

**GEO 555 Advanced Paleontology.** Three hours. Offered according to demand.
Prerequisite: GEO 355. Detailed examination of selected fossil groups.

**GEO 557 Geologic History of the Vertebrates and Land Plants.** Three hours. Offered
alternate years. Not open to students who have earned credit for GEO 457.
Prerequisite: GEO 102 or permission of the instructor.
Geologic history of vertebrates, invertebrates, and plants as they invaded the land and
evolved through time.

**GEO 559 Paleoecology.** Three hours. Offered according to demand.
Prerequisite: GEO 355 or permission of the instructor.
Examination of the relationships between fossil organisms and their depositional
environments.

**GEO 560 Watershed Hydrology.** Three hours. Not open to students who have earned credit for
GEO 460. Prerequisite: GEO 363 or permission of the instructor. Offered alternate spring
semesters or on demand.
Analysis of hydrological processes in a watershed. Emphasis on applying hydrology concepts
to evaluate runoff, erosion, fluvial processes, channel stability, ecological impact, and flood
prediction in natural and altered watersheds.

**GEO 561 Sequence and Seismic Stratigraphy.** Three hours. Offered according to demand.
Prerequisite: GEO 367.
A review of lithostratigraphic principles and an examination of the sequence stratigraphic
paradigm. Students also study methods of using lateral and vertical changes in seismic facies
to interpret the lithology and depositional history of subsurface stratigraphic units.

**GEO 562 Quaternary Environments.** Three hours. Offered alternate spring semesters or on
demand.
Prerequisite: GEO 363 or permission of the instructor.
Examination of quaternary glaciations and environmental changes. Emphasis on
sedimentologic, geomorphic, and biogeographic evidence of changes in geological,
hydrological, and biological processes in response to climatic variations. Not open to students
who have earned credit for GEO 462. Offered alternate spring semesters or on demand.

**GEO 564 Structural Validation and Modeling.** Three hours. Offered according to demand.
Theory and techniques for validating and modeling maps and cross-sections. Includes balance
and restoration of cross-sections, and derivation and use of predictive geometric and
kinematic models. Practical problem solving is emphasized.

**GEO 565 Comparative Structural Geology.** Three hours. Offered according to demand.
Analysis of the original literature on structural families and deformation-mechanism
associations, emphasizing the low-temperature environment.

**GEO 567 Clastic Depositional Environments: Processes and Facies.** Three hours.
Offered according to demand.
Prerequisite: GEO 367.
An examination of the relationships between sedimentary processes and facies. Emphasis is
on use of lateral and vertical changes in sediment composition, texture, and structures to
identify environments of deposition within the various clastic depositional systems.
GEO 570 General Geochemistry. Four hours. Offered fall semester. Prerequisite: GEO 314 or permission of the instructor. Not open to students who have earned credit for GEO 470. Overview of the field of geochemistry (elementary chemical equilibria and thermodynamics, organic geochemistry, isotope geochemistry), with an emphasis on solving geologic problems.

GEO 571 Thermodynamics for Geologists. Three hours. Offered alternate fall semesters. Prerequisite: MATH 126 or permissions of the instructor. Semi-derivational approach to understanding the thermodynamic relations most useful to geologists. Emphasis is on using the derived relations to solve common geologic problems.

GEO 575 Petrochemistry. Three hours. Offered according to demand. Prerequisite: Permission of the instructor. Principles and techniques in geochemical modeling of magmatic, hydrothermal, and metamorphic processes.

GEO 576 Analytical Geochemistry. Three hours. Offered according to demand. Theory, techniques, and applications of geochemical methods for the analysis of rocks, ores, and aqueous fluids.

GEO 577 Microanalysis in Geology. Three hours. Offered according to demand. Prerequisite: GEO 314 and GEO 470. Application of microprobe, scanning electron microscopy, and other microanalytical techniques in geology.

GEO 582 Advanced Stratigraphy. Three hours. Offered according to demand. Examines stratigraphic nomenclature, principles, and concepts. Lithostratigraphy, biostratigraphy, allostratigraphy, chronostratigraphy, and geochronology are studied.

GEO 583 Global Tectonics. Three hours. Study of tectonics, plate motions, and tectonic environments. Includes discussion of controlling factors, driving forces, and resulting structures with emphasis on island arcs, trenches, backarc basins, transform boundaries, and continental margins. Offered alternate spring semesters or by demand.

GEO 590 Seminar in Regional Geology. One hour. Offered according to demand. Prerequisite: GEO 314, GEO 365, and GEO 367. Literature and field study of the geology of selected areas.

GEO 598 Research Not Related to Thesis. Variable credit. Offered according to demand.

GEO 599 Thesis Research. Variable credit.

GEO 607 Introduction to Groundwater Modeling. Three hours. Offered Spring semester. Prerequisite: GEO 506, MATH 253, and CS 226; or permission of the instructor. Introduction to the theory and application of groundwater modeling.

GEO 608 Contaminant Hydrogeology and Modeling. Three hours. Offered Fall semester. Prerequisite: GEO 607 or permission of the instructor. Introduction to concepts and models in contaminant hydrogeology.

GEO 610 Fluvial Geomorphology. Three hours. Offered Fall semester. Analysis of fluvial processes, channel morphology, and channel responses. Emphasis on flow hydraulics, sediment transport, depositional mechanics, geomorphic effectiveness, and channel form adjustment.

GEO 626 Advanced Topics in Geology. Variable credit. Offered according to demand. Advanced topics in the following areas: economic geology, geochemistry, geohydrology, geophysics, geomorphology, mineralogy, paleontology, petrology, sedimentation, stratigraphy, structural geology, and tectonics.

GEO 634 Seminar in Tectonics. One hour. Offered Fall and Spring semesters.
Prerequisite: Permission of the instructor.
Discussion of current research in Tectonics and related subjects. May be repeated for credit.

**GEO 635/GEO 636 Graduate Seminar in Geology.** One hour. Offered Fall and Spring semesters.
Oral presentations on current geological topics. Offered Fall and Spring semesters.

**GEO 650 Isotope Geology.** Three hours. Offered according to demand.
Prerequisite: Permission of the instructor.
Principles of stable and radiogenic isotope geochemistry, and applications to economic geology, geochronology, petrology, and tectonics.

**GEO 652 Isotope Hydrology.** Three hours. Offered according to demand.
Prerequisite: GEO 570.
Study of the distribution, production, and usage of naturally occurring and anthropogenically introduced stable and radioactive isotopes in the earth’s surficial environment. Emphasis will be placed on the application of isotopes in solving hydrologic and geomorphic problems.

**GEO 663 Structural Geology Seminar.** Three hours. Offered according to demand.
Prerequisite: GEO 564, GEO 565, or permission of the instructor. May be repeated for credit.
Topics in quantitative structural geology.

**GEO 669 Carbonate Depositional Environments.** Three hours.
Prerequisite: GEO 512 or permission of the instructor.
Study of modern and ancient carbonate depositional systems, with emphasis on facies analysis and depositional modeling.

**GEO 673 Aqueous Environmental Geochemistry.** Three hours. Offered alternate Spring semesters. Prerequisite: GEO 570.
Advanced treatment of the topics of low-temperature aqueous geochemistry important for understanding inorganic processes controlling the chemical quality of surface and subsurface waters. Emphasis is on solving problems in environmental geochemistry.

**GEO 674 Organic Geochemistry.** Three hours.
Prerequisite: Permission of the instructor.
Study of the distribution, fate, and geochemical interactions of both natural and anthropogenic organic compounds in the environment.

**GEO 676 Chemical Diagenesis.** Three hours. Offered according to demand.
Study of chemical processes controlling diagenetic changes in carbonate and clastic rocks. Topics include dissolution/precipitation, porosity modification, secondary porosity, biologic diagenesis, pressure solution, mineral alternation, dolomitization, artificial diagenesis, and applications to oil exploration and production.

**GEO 681 Biostratigraphy and Paleobiogeography.** Three hours. Offered according to demand.
Prerequisite: GEO 582 or permission of the instructor.
Examination of the principles and techniques of biostratigraphy and paleobiogeography using examples from the Paleozoic Era.

**GEO 698 Non-Dissertation Research.** Variable credit. Offered according to demand.

**GEO 699 Dissertation Research.** Variable credit.
Admission Requirements

General requirements for all history degree programs. Admission decisions for all graduate history programs at The University of Alabama are made by the Graduate School based on a composite of subjective and quantitative information, including the applicant's statement of purpose and letters of recommendation, the academic standing of the programs in which the applicant has studied, evidence of appropriate college or graduate-level work in history courses, test scores, previous grades, and the recommendation of the Graduate Committee of the history department. Each application is considered in the context of other applications to the program, with due consideration given to the availability of space in the program, the need to maintain a pool of students of superior potential, and the need to encourage minority applications. Not every student whose credentials meet stated quantitative standards is admitted. Additional information is in the Admission Criteria section of this catalog.

Quantitative requirements for unconditional admission to MA program. The applicant must have a grade point average, based on a 4.0 system, of 3.0 overall or 3.0 for the last 60 semester hours in a degree program, and a score of at least 1500 on the combined verbal, quantitative, and analytical portions of the Graduate Record Examination. Applicants who take the GRE after October 1, 2002, must score at least 1000 on the combined verbal and quantitative portions and at least 4 on the analytical writing section.

Quantitative requirements for conditional admission to MA program. An applicant whose credentials do not meet the requirements for regular admission may be considered for conditional admission if he or she has a quality point average of at least 2.5 overall and a score of 1400 on the GRE. For applicants who take the GRE after October 1, 2002, conditional admission will require a score of 930 on the combined verbal and quantitative portions and at least 4 on the analytical writing portion. Conditional admission is rare and requires a special recommendation by the Graduate Committee. Students admitted conditionally must maintain a 3.0 average for the first 12 semester hours attempted. Failure to do so will result in dismissal from the program.

Special requirements for admission to PhD program. Students applying to the PhD program are expected to have GRE scores substantially above the minimum acceptable for MA applicants, a GPA in previous graduate work of 3.5 or better, and strong recommendations. Normally a successful applicant must also be endorsed by a faculty member prepared to serve as chairperson of the student's dissertation committee.

See the Admission Criteria section of this catalog for more information.

General Degree Requirements

Course load. Resident students are expected to register for full loads each semester—at least 9 hours, except in the case of 50 FTE teaching assistants, who must take at least 6 hours. All courses must be numbered 500 or above, but HY 699 Dissertation Research does not count toward the course hour requirement for any graduate degree.

Historiography requirement. All incoming graduate students (MA or PhD), unless specifically exempted by the Graduate Committee, must take at least two of the basic historiography courses (HY 601/HY 602 Literature of American History, HY 603 Literature of European history, and HY 605 Literature of Latin American History) as part of their degree program. They are encouraged to take these courses as early as possible in their program.
Seminar requirement. All MA students who choose Plan II (described under "Requirements for the MA Program" below) must take at least one research seminar. All doctoral students must complete two research seminars.

Language requirement. Unless specified to the contrary, all graduate degree programs in history require that each student demonstrate reading proficiency in one or more foreign languages. These languages should be selected from the standard research languages (Spanish, French, German, and Russian), but other languages relevant to the student's program may be substituted with the recommendation of the student's advisor and the permission of the Graduate Committee. The student must fulfill this requirement by passing the examination administered by the relevant language department at The University of Alabama. Completion of any of the various "language for reading proficiency" courses offered at The University of Alabama with a final grade of "B" or above also meets the language requirement.

Requirements for the MA Program

Plan I:
Coursework. Coursework totaling 24 credit hours in history and a thesis (an additional 6 credit hours of HY 599) are required, and the student must demonstrate reading proficiency in one foreign language before taking the final oral examination.

Thesis. The topic of the thesis will be selected by the student in consultation with his or her advisor. After the topic has been agreed upon, the student will prepare a prospectus describing the topic and the proposed plan of approach, including the principal sources to be used. Copies of the prospectus will be distributed to the student's advisory committee, which shall consist of three members, all of whom must indicate their acceptance of the topic.

Oral exam. The Plan I oral exam is on the MA coursework and the thesis. The examination committee consists of three professors who served as readers on the thesis, plus one additional history professor. The M.A. thesis must be submitted to the student's primary advisor no later than six weeks before the scheduled defense, and the revised thesis must be submitted to the remaining members of the student's advisory committee at least three weeks before the scheduled defense. The committee files with the director of graduate studies a written opinion regarding the student's suitability for further graduate work in history.

Plan II:
Coursework. Coursework totaling 30 credit hours in history is required, and the student must demonstrate proficiency in reading one foreign language before taking the final oral examination.

Oral exam. Plan II students must take an oral examination on their history courses and on a revised seminar paper, copies of which must be furnished to the members of the examining committee at least 10 days before the date of the oral examination. The examining committee must consist of at least four history professors, including as many as possible with whom the student has taken courses. The committee files with the director of graduate studies a written opinion regarding the student's suitability for further graduate work in history.

Special note on MA oral exams. In all of the MA oral examinations, two negative votes constitute failure of the examination. History graduate students may repeat failed oral examinations one time only, after an interval specified by the examining committee. Two negative votes constitute denial of admission to the doctoral program. The use of faculty from outside the department to serve on MA examination committees (except in cases where faculty from other disciplines are prescribed by the graduate regulations) must be approved well in advance by the Graduate Committee.

http://graduate.ua.edu/catalog/16200.html
Requirements for the PhD Program

History field requirements. The PhD degree is offered in United States history, history of the South, modern British and European history, Latin American history, and military and naval history. The four general divisions are separated into the following fields:

- United States history to 1877
- United States history since 1877
- History of the South
- British and European history, 1485 to 1815
- British and European history, 1815 to present
- Latin American history to 1810
- Latin American history since 1810
- Military and naval history

PhD students may, as their fourth, non-testing field, also create a thematic field, the exact boundaries of which will be settled in consultation with the Graduate Committee, provided that there are a minimum of two professors in the department who specialize in that area.

The PhD requires a total of 54 hours of graduate coursework. MA hours, including those accepted for transfer from other institutions, are included in this total. PhD students will offer four fields of history, with at least two, but not more than three, related to the same geographic area (U.S., Europe, or Latin America). The student must earn at least 12 hours of graduate credit in each of the four fields.

Beyond the 48 hours of history distributed in fields, the student must earn 6 additional hours of graduate credit (a) in a field outside the history department; (b) in history, but in fields not presented for the PhD; or (c) in history, but as additional hours in one or more of the fields presented for the PhD.

Language requirement. Each student is expected to demonstrate a reading knowledge of two foreign languages, with the exception of those whose major fields are in American history. Those working primarily in American history must demonstrate a knowledge of only one foreign language, although any advisor may require his or her student to continue to fulfill the two-language requirement if it seems necessary to the area of the student's research. For those who must satisfy the two-language requirement, a special skill pertinent to the candidate's doctoral dissertation may be substituted for one language on the recommendation of the student's advisor and with the permission of the Graduate Committee. The language and special skill requirements must be met before the scheduling of the comprehensive examinations.

Comprehensive examinations. The comprehensive examinations for admission to candidacy for the PhD consist of a four-hour written examination in each of three fields of history offered by the candidate, each administered by a committee of two or more professors representing the respective field. An oral examination will be administered subsequently by a committee consisting of not less than five professors who administered the written examinations. The comprehensive examinations are to be completed in a two-week period, with the written exams given the first week and the oral exam given the following week. The exam schedule must allow at least five days between the last written exam and the date of the oral exam. The written and oral exams in each field are considered a unit, which the student will pass or fail as a whole. Two negative votes constitute failure. A minimum of six months must elapse before the student may repeat a failed examination, the time of which will be set by the examining committee. A student is permitted to repeat a failed examination one time only.

Dissertation. Dissertations are to be based upon research in history and make an original contribution to knowledge. Each doctoral student will select and obtain approval for a dissertation topic before scheduling his or her comprehensive examinations. Students will select dissertation topics in consultation with their advisors. After the topic has been agreed

http://graduate.ua.edu/catalog/16200.html
upon, the student will prepare a prospectus describing the topic and the proposed plan of approach, including the principal sources to be pursued.

Copies of the prospectus will be distributed to the members of the student’s comprehensive exam committee in advance of the oral examination. The prospectus is accepted or rejected at the time of the oral comprehensive examination.

The Graduate School requires each student admitted to candidacy for the PhD to pursue completion of the dissertation without interruption by enrolling each semester in HY 699 for at least 3 credit hours. The student must register for a total of at least 24 hours of dissertation research.

Final oral examination. The candidate must pass an oral examination on the dissertation and the field of the dissertation in accordance with the rules of the Graduate School. The examination committee consists of the three professors who served as readers on the dissertation, plus at least one additional history professor and a representative of an outside department. Two negative votes constitute failure of the examination, which the student may repeat one time only, after an interval specified by the examining committee.

Using outside faculty on PhD examinations. Except in cases where faculty from other disciplines are prescribed by the graduate regulations, the use of faculty from outside the department to serve on PhD comprehensive or oral examinations must be approved well in advance by the Graduate Committee.

Scholastic Requirements
Any student who receives 6 hours of "C" grades or 3 hours of "D" or "F" grades in history courses shall be dismissed from the program, although the student dismissed may petition the Graduate Committee for reinstatement.
A student on probation or whose transcript carries a grade of "I" will ordinarily be ineligible for a teaching assistantship or other departmental financial support.

Transfer of Credit
Courses of full-graduate level credit earned in an accredited institution where a student was enrolled in the graduate school may be submitted for review for inclusion in a History degree program. Evaluation of credit for transfer will not be made until the student has enrolled in the Graduate School of The University of Alabama. Acceptance of credit requires the approval of the student’s advisor, the Graduate Committee of the Department of History, and the Dean of the Graduate School. Credit will not be accepted for transfer from any institution at which the student failed to achieve a “B” average on all of the graduate work attempted. Only courses in which a student earned a "B" grade or better may be transferred.

A student initiates with the Graduate School a request for evaluation of graduate credit obtained at another institution. The form is available at the “Web Forms” icon of the Graduate School’s homepage. It is also the student’s responsibility to ensure than an official transcript of the credit concerned is received by the Graduate School. All credit toward the MA degree must have been earned during the six years immediately preceding the date on which the degree is awarded. All credit toward the PhD must have been earned in the six years immediately preceding admission to the doctoral program.

The history department usually allows the transfer of 6 semester hours of credit toward the MA degree, although in exceptional cases up to 12 hours may be accepted. No more than one-half of PhD coursework hours (not including HY 699) may be transferred from another institution.

Additional information is in the Degree Requirements section of this catalog for both the MA and PhD degrees.
Course Descriptions

HY 500 Special Studies in History. Three hours.

HY 501 Japanese Civilization to 1550. Three hours.
Survey of Japanese history from the beginning through the 16th century. Major emphasis is on the period after A.D. 400.

HY 502 Modern Japan since 1550. Three hours.
Major emphasis is on the end of the Tokugawa Period (1800–68) and the rise of modernized Japan in the Meiji Period (1868–1912) and the 20th century.

HY 503 Chinese Civilization to 1600. Three hours.
Survey of Chinese culture from the Shang Period through the Ming Period.

HY 504 Modern China since 1600. Three hours.
Survey of Chinese history in the Ch’ing Dynasty and the 20th century. Major emphasis is on 19th- and 20th-century events.

HY 508 Colonial United States to 1763. Three hours.
Topical survey of major themes in U.S. colonial history, with particular emphasis on Anglo-American developments.

HY 509 American Revolution and the Founding of the Nation, 1763–1815. Three hours.
The development of revolutionary sentiment in the North American colonies, the resulting revolution, and the subsequent efforts to establish the new nation.

HY 513 From the Mexican War through the Civil War. Three hours.
Examines how Americans made war in the middle of the 19th century and how waging war affected the evolution of politics and society.

HY 516 U.S. from Reconstruction to World War I. Three hours.
Selected topics relating to the development of the U.S., especially domestic affairs and the growth of important institutions.

HY 517 U.S. from World War I through World War II. Three hours.
Covers the participation of the U.S. in two world wars and the events of the intervening years. Government, commerce, and industry receive attention and analysis.

HY 521 American Legal History (same as LAW 772). Three hours.
Critical history of American law and institutions, emphasizing the period since 1750.

HY 522 History of American Labor Law (same as LAW 617). Three hours.
Problems in the legal history of U.S. labor movements, including slavery law, the law and the American worker, the labor conspiracy doctrine, the labor injunction, and the growth of federal labor legislation and case law.

HY 523 Constitutional History of the U.S. to 1877. Three hours.
Deals with evolution of U.S. constitutional law and the nature and process of judicial review, including 18th-century constitutional theory and Supreme Court decisions.

HY 524 Constitutional History of the U.S. since 1877. Three hours.
Continuation of HY 523.

HY 525 Rise of America to World Power. Three hours.
HY 526 U.S. as a World Power, 1898 to the Present. Three hours. Survey of American foreign policy from the Spanish-American War of 1898 to the present.

HY 529 American South and Southwest, 1513–1821. Three hours. History of the Spanish advance into the present-day borders of the U.S., explaining how Spain fought and finally succumbed to the more dynamic and aggressive French and English.

HY 530 U.S. Economic History since the Colonial Period. Three hours. A survey of U.S. economic history from the colonial period to the present. Emphasis will be placed on the role of business, social, and voluntary organizations.

HY 534 U.S. Social History to 1865. Three hours. Topical survey of major social forces in the U.S., emphasizing the colonial experience of Americans and its impact on future generations.

HY 535 U.S. Social History since 1865. Three hours. Topical survey of major social forces, with particular emphasis on immigration, voluntary association, and suburbanization.


HY 542 The Middle Ages. Three hours. Foundations of the modern world in barbarian Europe: retreat into the countryside and private government, recovery of public institutions, money economy, and cultural vitality.

HY 543 Renaissance. Three hours. Intellectual movements associated with the Renaissance, with readings in Machiavelli's Prince, More's Utopia, and other humanist writings; social and economic life, religion, politics, and statecraft.

HY 544 Reformation and Counter-Reformation. Three hours. History of the separation of Catholic and Protestant churches from the ideal of the universal Christian church; late-Medieval religious practice.

HY 545 17th-Century Europe. Three hours. Troubled times, dominated by wars, depressions, harvest failures, and epidemics, but also the times of Baroque art, classical literature, critical philosophy, and scientific revolution.

HY 546 Age of Reason, 1715–89. Three hours. The Enlightenment of Voltaire, Diderot, Rousseau, Franklin, Hume, Goethe, and Kant, whose writings exalted individual reason, tolerance, liberalism, science, and public service and set the stage for the French Revolution.

HY 547 French Revolution and Napoleon. Three hours. Causes, course, and effects of the revolution, from the storming of the Bastille to Napoleon's seizure of power, conquests, and final defeat at Waterloo.

HY 548 Europe, 1815–50. Three hours. Europe in the first half of the 19th century: industrial expansion, changes in social structure, and the new ideologies of romanticism, nationalism, socialism, and liberalism.

HY 549 Europe, 1850–1914. Three hours. Culture and history of Europe to World War I: major institutions, values, and ideas, as well as the social environment in which Europeans lived.

HY 551 Europe since 1914. Three hours. Zenith and decline of the great imperial powers of Europe through World Wars I and II; tensions of the Cold War, the Common Market, and European unity.
HY 554 German History to 1740. Three hours.
A survey of the Germanies from the early migrations to the rise of Prussia under the Hohenzollern dynasty, with emphasis on the development of German particularism and distinctive characteristics.

HY 555 German History since 1740. Three hours.
A survey of German history from Frederick the Great to Adolph Hitler, with emphasis on the Austro-Prussian conflict, the Bismarckian Empire, and the two world wars.

HY 557 World War I. Three hours.
"The War to End All Wars," from the European crises culminating at Sarajevo in 1914 to peacemaking at Versailles in 1919. Major emphasis is on the western and eastern fronts and on the war at sea.

HY 558 World War II. Three hours.
The global conflict—or series of conflicts—from Manchukuo in 1931 to Tokyo Bay in 1945. Battles on land, at sea, and in the air; life on the home fronts and in enemy-occupied areas; and the war's legacy to future generations.

HY 561 Russia to 1894. Three hours.
Conventional political history of Russia from the ninth century to the 19th century, followed by the social and cultural history of the Russian revolutionary movement.

HY 562 History of Russia since 1894. Three hours.
Crisis in Russian society and the coming of the revolution; emergence of Stalinism; and political developments since World War II, including the post-Cold War era.

HY 570 Spanish Viceroyalties of America. Three hours.
The conquest and colonization of America by Spain, from the voyages of Columbus to the Wars of Independence in the early 19th century.

HY 571 The Age of Exploration and Conquest. Three hours.
A history of exploration from ancient times to the 16th and 17th centuries, when European nations expanded by sea voyages and conquest, penetrating the Americas, Africa, and Asia and basically completing the geographical knowledge of the earth.

HY 572 Modernization of South America. Three hours.
Survey of political, economic, and social trends in the major nations since 1930.

HY 573 The Andean Nations. Three hours.
Examines the political, economic, social, and cultural history of the Andean nations since independence, with emphasis on Colombia, Peru, and Venezuela.

HY 574 Relations of the U.S. and Latin America. Three hours.
Chronological survey of diplomatic, economic, and cultural relations, with emphasis on the 20th century.

HY 575 Caribbean Basin, 1492 to the Present. Three hours.
Traces the evolution of the nations of the Caribbean and Central America from the first European settlements in the 16th century to the present.

HY 580 Survey of Military History. Three hours.
Introduction to the field of military history and to the writing of military history from ancient times to the present, with an emphasis on the 19th and 20th centuries.

HY 583 Comparative Revolutions in the Modern World. Three hours.
Comparative study of revolutionary movements in the Western and non-Western worlds.

HY 590 England under the Tudors. Three hours.
Development of an early modern state: establishment of strong central monarchy, religious
crises from the Reformation to the Puritan movement, and exuberance and excess of an expanding society.

**HY 591 England under the Stuarts.** Three hours.
How Englishmen of the 17th century worked out the great questions of their day: Was liberty compatible with strong and effective government? Could English elites share their power without destroying it? Finally, what did God want for England?

**HY 593 Britain in the 18th Century.** Three hours.
From the Hanoverian Succession in 1714 to victory at Waterloo in 1815: political development, agrarian and industrial revolutions, John Wesley, Samuel Johnson, and an apparently endless succession of wars.

**HY 594 Britain in the Victorian Age.** Three hours.
Britain at her apogee: possessor of the empire on which the sun never set; world economic leader; nation of Peel and Palmerston, Gladstone and Disraeli, Dickens and Trollope, Tennyson and Browning, Turner and Constable, and Victoria and Albert.

**HY 595 Britain in the 20th Century.** Three hours.
The course looks at Britain from the death of Queen Victoria to Mrs. Thatcher: the decline of the British Empire, the two World Wars, the rise of the welfare state, the Common Market, and economic resurgence.

**HY 599 Thesis Research.** One to six hours.

**HY 600 Teaching History.** One hour.

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Group I—Historiography Courses

**HY 601 Literature of American History to 1865.** Four hours.

**HY 602 Literature of American History since 1865.** Four hours.

**HY 603 Literature of European History.** Four hours.

**HY 605 Literature of Latin American History.** Four hours.

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Group II—Proseminars

**HY 606 Proseminar in United States History to 1877.** Four hours.

**HY 607 Proseminar in United States History since 1877.** Four hours.

**HY 608 Proseminar in Southern History.** Four hours.

**HY 620 Proseminar in Latin American History.** Four hours.

**HY 631 Proseminar in Early Modern British and European History.** Four hours.

**HY 635 Proseminar in Recent British and European History.** Four hours.

**HY 639 Proseminar in Military and Naval History.** Four hours.
Group III—Seminars

HY 651 Seminar in United States History to 1877. Four hours.
HY 657 Seminar in United States History since 1877. Four hours.
HY 658 Seminar in Southern History. Four hours.
HY 660 Seminar in State and Local History. Four hours.
HY 665 Special Studies Seminar. Four hours.
HY 670 Seminar in Latin American History. Four hours.
HY 682 Seminar in British and European History. Four hours.
HY 684 Seminar in Military and Naval History. Four hours.

Group IV—Directed Study

HY 697 Directed Readings. One to four hours.
Prerequisite: Written permission of the director of graduate studies.

HY 698 Directed Research not Related to Dissertation. One to four hours.
Written permission of the director of graduate studies is required for admission.

HY 699 Dissertation Research. Three to twelve hours.
Not to be counted for required credit for advanced degrees.
The graduate Marine Science Program (MSP) is a dual-campus program of the Department of Biological Sciences at The University of Alabama and University programs at the Dauphin Island Sea Lab (DISL), a facility of the Alabama Marine Environmental Sciences Consortium (MESC). Both sites provide unique facilities to support education and research in the field of marine science. The main campus facilities include a marine algae and marine invertebrate collection. At DISL, there is a diversely trained resident faculty available year-round to teach graduate-level courses that are part of the MSP curriculum, to serve as thesis advisors, to provide support space, and to employ resident students in funded extramural research projects. The library at DISL specializes in publications that focus on the marine environment.

In addition, DISL provides support for University programs by way of a research facility containing offices, laboratories, and support facilities for the resident graduate faculty; three lecture-room/teaching-laboratory buildings; and two dormitories, an efficiency apartment building, and a dining hall. Access to the bay and Gulf waters is available via scheduled use of the 65-foot steel-hull R/V *A. E. Verrill* and by a variety of outboard-motor-powered craft that can be towed to different sites for launching.

Courses offered at DISL carry the same credit toward graduate degrees as those taught on The University of Alabama campus by the Department of Biological Sciences.

**Admission Requirements**

Students seeking admission to the Marine Science Program must satisfy the general admission requirements of the Graduate School, found in the Admission Criteria section of this catalog. For further specific information, please contact Dr. Julie Olson, Coordinator of Graduate Studies, the University of Alabama Marine Science Program, 120B Biology Building, Tuscaloosa, AL 35487, Box 870344; telephone (205) 348-2633 OR 101 Bienville Boulevard, Dauphin Island, AL 36528; telephone (334) 861-7528; fax (334) 861-7540; e-mail jolson@biology.as.ua.edu.

**Degree Requirements**

Each candidate will be guided by a graduate committee consisting of at least three members appointed by the dean of the Graduate School. Usually, one member of the committee will be a qualified member of the faculty in residence on the Tuscaloosa campus.

Each student must complete a minimum of 8 hours of graduate credit on the Tuscaloosa campus. Normally, this occurs during the student's first calendar year in the Graduate School. No foreign language is required.

Each student will undergo a preliminary examination prepared by the student's graduate committee and designed to be answered in about four hours a day over three consecutive days. The examination will be administered by the committee chairperson no later than the third semester of enrollment. Prior to the examination, it is expected that the student will discuss preparation and subject matter with committee members. Each student will participate in an interdisciplinary effort (e.g., cruise or field exercise) at some time during residence at the Dauphin Island Sea Lab.

Each student, upon completion of the coursework and thesis, will present a faculty- and peer-review seminar on the thesis content. Additionally, the graduate committee will administer a final oral examination. The master of science in marine science degree requires at least 24 hours of graduate credit. Both Plan I and Plan II are acceptable. Additional information is in the Degree Requirements section of this catalog.
Financial Support
The Marine Science Program cannot commit funds to prospective students. However, there are sources of funds—both within the University and at DISL. On campus, qualified students may compete for available departmental graduate teaching assistantships, when funds are available. Consideration is based on a combination of composite GRE scores and most recent degree GPA. Additional consideration may be given to students possessing special skills. At DISL, resident students may be supported by DISL fellowships or assistantships, faculty research grants or contracts, or extramural funding.

Courses in Marine Science (MS)
Most marine science courses are offered year-round at the Dauphin Island Sea Lab. The following courses are also available at the 400 level; students enrolling at the 500 level must complete additional work and may be required to participate in or conduct a research project, to be presented both orally and visually and accompanied by a written professional report.

MS 511, MS 519, MS 521, MS 533, MS 548, MS 552, MS 553, MS 597

Course Descriptions
Students may not receive credit at both the graduate and undergraduate levels for courses having the same name and number.

MS 501 Phytoplankton Ecology and Physiology. Three hours.
Prerequisites: General biology and marine ecology.
Phytoplankton ecology, with emphasis on physiological adaptations promoting growth and distribution.

MS 505 Marine Biogeochemical Cycles. Three hours.
Prerequisite: Oceanography, marine biology, or marine ecology.
Marine elemental cycles, with emphasis on biological and geochemical processes that regulate them.

MS 506 Marine Biology for Teachers. Six hours.
Prerequisites: Graduate standing in the College of Education and permission of the instructor. Not open to graduate students in biology or to any student who has taken MS 306.
A survey of marine organisms and communities and physical and chemical factors that influence their lives. Also covered are materials and methods of marine science instruction.

MS 511 Marsh Ecology. Four hours.
Prerequisites: Graduate standing in a science and permission of the instructor.
A study of the floral and faunal elements of various marine marsh communities. Interaction of physical and biological factors is emphasized. The course is structured to provide actual field experience in addition to lecture material. Trips are scheduled to acquaint students with regional examples of marsh types.

MS 519 Marine Ecology. Four hours.
Prerequisites: Graduate standing in a science and permission of the instructor.
Bioenergetics, community structure, population dynamics, predation, competition, and speciation in marine ecosystems.

MS 521 Coastal Ornithology. Four hours.
Prerequisites: Graduate standing in a science and permission of the instructor.
Study of coastal and pelagic birds, with emphasis on ecology, taxonomy, and distribution.

MS 522 Field Marine Science. Two hours.
Prerequisite: Graduate standing.
A field research and habitat-exploration course.

MS 533 Coastal Zone Management. Two hours.
Review of ecological features and a set of physical management policies for coastal
communities, and a description of relevant federal and state programs.

**MS 538 Marine Zoogeography.** Four hours.
Prerequisites: Graduate standing in a science and permission of the instructor.
A study of physical, chemical, and biological factors influencing the distribution of marine organisms. Emphasis is on the western North Atlantic ocean.

**MS 541 Benthic Community Structure.** Three hours.
Prerequisites: Graduate standing in a science and permission of the instructor.
A comprehensive examination of benthic faunal populations with respect to major taxa, community composition, diversity, and limiting environmental factors; emphasis is on local habitats.

**MS 543 Plankton.** Four hours.
For graduates and advanced undergraduates. A study of physical, chemical, and biological factors influencing the distribution of marine organisms. Emphasis is placed on the western North Atlantic ocean.

**MS 548 Introduction to Oceanography.** Four hours.
Prerequisites: General physics, general biology, MATH 125, and permission of the instructor.
A general introduction to the oceans, with emphasis on chemical, physical, and geological processes and the relationship of these processes to biological systems.

**MS 552 Marine Vertebrate Zoology.** Four hours.
Prerequisites: Graduate standing in a science and permission of the instructor.
Systematics, zoogeography, and ecology of marine fishes, reptiles, and mammals.

**MS 553 Marine Botany.** Four hours.
Prerequisites: Graduate standing in a science and permission of the instructor.
Reproduction, taxonomy, systematics, distribution, and ecology of the major plant groups in the marine environment.

**MS 584 Marine Science Seminar.** One hour.

**MS 594 Oceanology of the Gulf of Mexico.** Two hours.
Prerequisites: Graduate standing in a science and permission of the instructor.
Detailed descriptive study of the oceanology of the Gulf of Mexico and adjacent waters. The areas of study will include the coastal zone, continental shelf, and deep gulf.

**MS 597 Special Topics in Marine Science.** One to four hours.
Offered according to demand. May deal with any marine science topic not covered by existing courses. The credit hours and format are arranged as appropriate to each topic. The specific course title is added at the time each course is taught.
THE UNIVERSITY OF ALABAMA GRADUATE CATALOG

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6.14 DEPARTMENT OF MATHEMATICS (MATH)
Chairperson: Professor Zhijian Wu, Office: 345 Gordon Palmer Hall
Graduate Director: Professor Vo Liem, Office: 332-C Gordon Palmer Hall

The department offers programs leading to the master of arts and the doctor of philosophy degrees. The department offers courses in the following areas: algebra, analysis, topology, differential equations, mathematical methods for engineering, mathematics for finance, mathematical statistics, numerical analysis, fluid dynamics, control theory, and optimization theory.

Admission Requirements
To be admitted for a graduate degree, students are expected to satisfy the general requirements of the Graduate School, as stated in the Admission Criteria section of this catalog. In support of the application, each applicant must submit scores on the general test of the Graduate Record Examination; the advanced portion is desirable but not required.

Degree Requirements

Master of arts. Each student's program for the master's degree must be approved by the department and the Graduate School. Students need to follow all policies found in the master's degree policies section of the Graduate Catalog.

A total of 30 graduate hours is required to obtain a master's degree in mathematics. Candidates for the master's degree may choose either of two plans. One plan (Plan I) requires successful completion of 24 semester hours of coursework, plus a thesis. The other plan (Plan II) requires no thesis, but requires successful completion of 27 semester hours of coursework plus 3 hours of work devoted to a project supervised by a member of the graduate faculty in mathematics. At least 21 of the course hours must be taken in mathematics; courses in related areas, such as physics, finance, or computer science, may be taken with the approval of the graduate advisory committee. An oral examination is required for completion of the degree. Candidates for the master's degree must complete three of the following four core courses: MATH 510 Numerical Linear Algebra, MATH 532 Graph Theory and Applications, MATH 580 Real Analysis I, and MATH 585 Introduction to Complex Calculus.

Doctor of philosophy. The student's Plan of Study for the PhD degree in mathematics must be approved by the department and the Graduate School by the time the student completes 30 graduate semester hours of UA and/or transfer course work. Students also need to follow all policies found in the doctoral degree policies section of the Graduate Catalog.

PhD students in mathematics normally take three two-course sequences in mathematics/applied mathematics. A total of at least 48 hours of coursework is required. Dissertations for the PhD degree in mathematics may be written in any one of several areas approved by the department. A total of at least 24 hours of dissertation research must be taken. Before officially becoming a PhD candidate, the student must pass qualifying examinations in two areas within three years of becoming a full-time graduate student. One of the passes obtained should normally be in the area of the dissertation.

The joint PhD program in applied mathematics is a program with the UA System campuses in Birmingham and Huntsville. Admission to the program is obtained by passing the joint program examination in linear algebra, numerical linear algebra, and real analysis. Each program of study requires a minimum of 54 semester hours of coursework approved by the student's joint graduate study supervisory committee. Those hours must include a major area concentration consisting of at least six courses in addition to the courses needed to prepare for the joint program examination, and an application minor consisting of at least four related graduate courses in some area outside the department. Before officially becoming a PhD
candidate in this program, a student must pass the comprehensive qualifying examination that covers the entire program of study. Neither the joint program examination nor the comprehensive qualifying examination can be taken more than twice.

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### Course Descriptions

**MATH 500 Mathematical Methods of Physics I.** Three hours.
Prerequisite: MATH 238.
Vector calculus, tensors and matrices, functions of a complex variable, and special functions.

**MATH 501 Mathematical Methods of Physics II.** Three hours.
Prerequisite: MATH 500.
Special functions, Fourier series and integral transforms, Green's functions, and group theory.

**MATH 502 History of Mathematics.** Three hours.
Prerequisite: Permission of the department.
Designed to increase awareness of the historical roots of the subject and its universal applications in a variety of settings, showing how mathematics has played a critical role in the evolution of cultures over both time and space.

**MATH 504 Topics in Modern Mathematics for Teachers.** Three hours.
Prerequisite: Permission of the department.
Diverse mathematical topics designed to enhance skills and broaden knowledge in mathematics for secondary mathematics teachers.

**MATH 505 Geometry for Teachers.** Three hours.
Prerequisite: MATH 125 or permission of the department.
A survey of the main features of Euclidean geometry, including the axiomatic structure of geometry and the historical development of the subject. Some elements of projective and non-Euclidean geometry are also discussed.

**MATH 506 Curriculum in Secondary Mathematics.** Three hours.
Prerequisite: Admission to Teacher Education Program in secondary mathematics or permission of the department.

**MATH 507 Theory of Numbers.** Three hours.
Prerequisite: Permission of the department.
Designed for graduate students not majoring in mathematics. Familiarity with the types of arguments to prove facts about divisibility of integers, prime numbers, and modular congruencies. Other topics, such as the Fermat theorem, Euler's theorem, and the law of quadratic reciprocity, will be discussed.

**MATH 508 Topics in Algebra.** Three hours.
Prerequisite: Permission of the department.
Content changes from semester to semester to meet the needs of students. Designed for graduate students not majoring in mathematics.

**MATH 509 Discrete Mathematics for Computer Science.** Three hours.
Prerequisite: Graduate standing.
Develops students' abilities to think abstractly and logically by applying techniques of discrete mathematics to computer science problems.

**MATH 510 Numerical Linear Algebra.** Three hours.
Prerequisites: MATH 237 (or MATH 257) or equivalent.
Direct solution of linear algebraic systems, analysis of errors in numerical methods for solutions of linear systems, linear least-squares problems, orthogonal and unitary transformations, eigen values and eigenvectors, and singular value decomposition.

**MATH 511 Numerical Analysis I.** Three hours.
Prerequisites: MATH 237, MATH 238 or MATH 257, and CS 226; or equivalent.
Numerical methods for solving nonlinear equations; iterative methods for solving linear systems of equations; approximations and interpolations; numerical differentiation and integration; and numerical methods for solving initial-value problems for ordinary differential equations.

**MATH 512 Numerical Analysis II.** Three hours.
Prerequisite: MATH 411, MATH 511, or equivalent.
Continuation of MATH 511 with emphasis on numerical methods for solving partial differential equations. Also covers least-squares problems, Rayleigh-Ritz method, and numerical methods for boundary-value problems.

**MATH 513 Finite-Element Methods.** Three hours.
Prerequisites: MATH 343 and MATH 382.
Corequisite: MATH 510.
Quadratic functional on finite dimensional vector spaces, variational formulation of boundary value problems, the Ritz-Galerkin method, the finite-element method, and direct and iterative methods for solving finite-element equations.

**MATH 520 Linear Optimization.** Three hours.
Prerequisite: MATH 237.
Topics include formulation of linear programs, simplex methods and duality, sensitivity analysis, transportation and networks, and various geometric concepts.

**MATH 521 Optimization Theory II.** Three hours.
Prerequisite: MATH 321 or MATH 520.
Corequisite: MATH 510 or permission of the instructor.
Emphasis on traditional constrained and unconstrained nonlinear programming methods, with an introduction to modern search algorithms.

**MATH 522 Mathematics for Finance I.** Three hours.
Prerequisites: MATH 227 and MATH 355 or with permission of the instructor.
An introduction to financial engineering and mathematical model in finance. This course covers basic no-arbitrage principle, binomial model, time value of money, money market, risky assets such as stocks, portfolio management, forward and future contracts and interest rates.

**MATH 523 Convex Analysis I.** Three hours.
Prerequisites: MATH 257 and MATH 380, or permission of the department.
Introduction to convex analysis. Topics include basic concepts, topological properties, duality correspondences, and representation and inequalities of convex sets and functions.

**MATH 528 Introduction to Optimal Control.** Three hours.
Prerequisite: MATH 238.
Corequisite: MATH 510 or permission of the department.
Introduction to the theory and applications of deterministic systems and their controls. Major topics include calculus of variations, the Pontryagin maximum principle, dynamic programming, stability, controllability, and numerical aspects of control problems.

**MATH 532 Graph Theory and Applications.** Three hours.
Prerequisites: MATH 237 or MATH 257, and MATH 382 or permission of the instructor.
Survey of several of the main ideas of general graph theory with applications to network theory. Topics include oriented and nonoriented linear graphs, spanning trees, branchings and connectivity, accessibility, planar graphs, networks and flows, matchings, and applications.

**MATH 537 Special Topics in Applied Mathematics I.** Three hours.
Prerequisite: Permission of the department.

**MATH 538 Special Topics in Applied Mathematics II.** Three hours.
Prerequisite: Permission of the department.

**MATH 541 Boundary Value Problems.** Three hours.
Prerequisites: MATH 343 and MATH 382, or permission of the department.
Emphasis on boundary-value problems for classical partial differential equations of physical sciences and engineering. Other topics include boundary-value problems for ordinary differential equations and for systems of partial differential equations.

**MATH 542 Integral Transforms and Asymptotics.** Three hours.
Prerequisite: MATH 441, MATH 541, or permission of the department.
Introduction to complex variable methods, integral transforms, asymptotic expansions, WKB method, matched asymptotics, and boundary layers.

**MATH 544 Singular Perturbations.** Three hours.
Prerequisites: MATH 382 and MATH 441 (or MATH 541), or permission of the department.
Topics include regular perturbation methods for solving partial differential equations, matched asymptotic methods for differential equations, and the methods of strained coordinates and multiple scales, with applications to problems in combustion theory, fluid dynamics, and biology.

**MATH 545 Theoretical Foundations of Fluid Dynamics I.** Three hours.
Prerequisite: MATH 343, AEM 264 or equivalent, or permission of the department.

**MATH 546 Theoretical Foundations of Fluid Dynamics II.** Three hours.
Prerequisite: MATH 545 or equivalent, or permission of the department.
Introduction to asymptotic methods and other approximate methods applied to classical problems in boundary-layer theory, low Reynolds number flows, surface gravity waves, shallow-water theory, and hydrodynamic stability.

**MATH 551 Mathematical Statistics with Applications I.** Three hours.
Prerequisites: MATH 237 and MATH 355.
Introduction to mathematical statistics. Topics include bivariate and multivariate probability distributions; functions of random variables; sampling distributions and the central limit theorem; concepts and properties of point estimators; various methods of point estimation; interval estimation; tests of hypotheses; and Neyman-Pearson lemma with some applications. Credit for this course will not be counted toward an advanced degree in mathematics.

**MATH 552 Mathematical Statistics with Applications II.** Three hours.
Prerequisite: MATH 551.
Considers further applications of the Neyman-Pearson lemma, likelihood ratio tests, chi-square test for goodness of fit, estimation and test of hypothesis for linear statistical models, the analysis of variance, analysis of enumerative data, and some topics in nonparametric statistics. Credit for this course will not be counted toward an advanced degree in mathematics.

**MATH 554 Mathematical Statistics I (equivalent to ST 554).** Three hours.
Prerequisites: MATH 237 and MATH 382.
Distributions of random variables, moments of random variables, probability distributions, joint distributions, and change of variable techniques.

**MATH 555 Mathematical Statistics II (equivalent to ST 555).** Three hours.
Prerequisite: MATH 554.
Order statistics, asymptotic distributions, point estimation, interval estimation, and hypothesis testing.

**MATH 556 Mathematical Statistics III (equivalent to ST 610).** Three hours.
Prerequisite: MATH 555.
Generalized inverse matrices; distribution of quadratic forms; regression analysis when the model is of full rank; regression using dummy variables and analysis of variance models; and regression analysis when the model is not of full rank.
MATH 557 Stochastic Processes with Applications I. Three hours.
Prerequisite: MATH 554 or ST 554.
Introduction to the basic concepts and applications of stochastic processes. Markov chains, continuous-time Markov processes, Poisson and renewal processes, and Brownian motion. Applications of stochastic processes including queueing theory and probabilistic analysis of computational algorithms.

MATH 559 Stochastic Processes with Applications II. Three hours.
Prerequisite: MATH 355 and MATH 557, or permission of the department.
Continuation of MATH 557. Advanced topics of stochastic processes including Martingales, Brownian motion and diffusion processes, advanced queueing theory, stochastic simulation, and probabilistic search algorithms (simulated annealing).

MATH 560 Introduction to Differential Geometry. Three hours.
Prerequisites: MATH 380 or MATH 382, and permission of the department.
Introduction to basic classical notions in differential geometry: curvature, torsion, geodesic curves, geodesic parallelism, differential manifold, tangent space, vector field, Lie derivative, Lie algebra, Lie group, exponential map, and representation of a Lie group.

MATH 565 Introduction to General Topology. Three hours.
Prerequisite: MATH 380.
Basic notions in topology that can be used in other disciplines in mathematics. Topics include topological spaces, open sets, closed sets, basis for a topology, continuous functions, separation axioms, compactness, connectedness, product spaces, quotient spaces, and metric spaces.

MATH 566 Introduction to Algebraic Topology. Three hours.
Prerequisites: MATH 565 and a course in abstract algebra.
Homotopy, fundamental groups, covering spaces, covering maps, and basic homology theory, including the Eilenberg Steenrod axioms.

MATH 570 Principles of Modern Algebra I. Three hours.
Prerequisite: MATH 257.
Designed for graduate students not majoring in mathematics. A first course in abstract algebra. Topics include groups, permutations groups, Cayley's theorem, finite Abelian groups, isomorphism theorems, rings, polynomial rings, ideals, integral domains, and unique factorization domains. Credit for this course will not be counted toward an advanced degree in mathematics.

MATH 571 Principles of Modern Algebra II. Three hours.
Prerequisite: MATH 470 or equivalent.
The basic principles of Galois theory are introduced in this course. Topics covered are rings, polynomial rings, fields, algebraic extensions, normal extensions, and the fundamental theorem of Galois theory.

MATH 573 Abstract Algebra I. Three hours.
Prerequisite: MATH 470 or equivalent.
Fundamental aspects of group theory are covered. Topics include Sylow theorems, semi-direct products, free groups, composition series, nilpotent and solvable groups, and infinite groups.

MATH 574 Cryptography. Three hours.
Prerequisite: MATH 307, MATH 470/MATH 570, or permission of department.
Introduction to a rapidly growing area of cryptography, an application of algebra, especially number theory.

MATH 580 Real Analysis I. Three hours.
Prerequisites: MATH 380 and permission of the department.
Topics covered include measure theory, Lebesgue integration, convergence theorems, Fubini's theorem, and LP spaces.

MATH 583 Complex Analysis I. Three hours.
Prerequisites: MATH 380 and permission of the department.
The basic principles of complex variable theory are discussed. Topics include Cauchy-Riemann
equations, Cauchy's integral formula, Goursat's theorem, the theory of residues, the
maximum principle, and Schwarz's lemma.

**MATH 585 Introduction to Complex Calculus.** Three hours.
Prerequisite: MATH 227.
Some basic notions in complex analysis. Topics include analytic functions, complex
integration, infinite series, contour integration, and conformal mappings. Credit for this course
will not be counted if it is taken after MATH 583.

**MATH 588 Theory of Differential Equations I.** Three hours.
Prerequisites: MATH 238 and MATH 380 or MATH 580.
Topics covered include existence and uniqueness of solutions, Picard theorem, homogenous
linear equations, Floquet theory, properties of autonomous systems, Poincare-Bendixson
theory, stability, and bifurcations.

**MATH 589 Theory of Differential Equations II.** Three hours.
Prerequisite: MATH 588.
Typical topics covered include principal Lyapunov stability and instability theorems; invariance
theory; perturbation of linear systems including stable and unstable manifolds; periodic
solutions of systems; Hopf bifurcations; and degree theory.

**MATH 591 Teaching College-Level Mathematics.** Three hours.
Prerequisite: Permission of the instructor or the department.
Provides a basic foundation for teaching college-level mathematics; to be taken by graduate
students being considered to teach undergraduate-level mathematics courses.

**MATH 592 Introduction to Graduate Mathematics.** Three hours.
Prerequisite: MATH 237, MATH 257, or permission of the department.
Should prepare beginning graduate students for graduate-level mathematics. Dependent on
students' backgrounds, analysis and linear algebra topics will be covered. Proofs and
examples will form major course components.

**MATH 598 Research Not Related to Thesis.** Three to nine hours.

**MATH 599 Thesis Research.** One to six hours.

**MATH 610 Iterative Methods for Linear Systems.** Three hours.
Prerequisite: MATH 511.
Corequisite: MATH 512.
Describes some of the best iterative techniques for solving large sparse linear systems.

**MATH 623 Convex Analysis II.** Three hours.
Prerequisite: MATH 523 or permission of the department.
Second course in convex analysis. Topics include differential theory, constrained extremum
problems, and saddle functions and minimax theory for convex functions.

**MATH 625 Optimization by Vector Space Methods.** Three hours.
Prerequisite: MATH 580 or permission of the department.
Involves applications of geometric principles of linear vector space theory to complex infinite-
dimensional optimization problems. Topics include linear spaces, Hilbert spaces, least-square
estimation, dual spaces, linear operators and adjoints, optimization of functionals, global and
local theory of optimization, and interactive methods of optimization.

**MATH 639 Seminar: Topics in Applied Mathematics.** One to three hours.

**MATH 640 Waves in Fluids.** Three hours.
Prerequisites: MATH 545 (or AEM 500) and MATH 542, or permission of the department.
Analysis of various wave motions and development of fundamental ideas of general
application to waves in fluids. Sound waves, water waves, and internal waves.
MATH 642 Viscous Flows. Three hours.
Prerequisites: MATH 545 (or AEM 500) and MATH 541, or permission of the department. Review of equations of fluid motion, tensors, and the Navier-Stokes equation. The role of viscosity in creeping flows and boundary layers.

MATH 644 Hydrodynamic Stability. Three hours.
Prerequisite: MATH 545 or AEM 500.
Fundamental ideas, methods, results, and applications of hydrodynamic stability. Introduction to some current research topics.

MATH 659 Seminar: Probability Models. One to three hours.

MATH 661 Algebraic Topology I. Three hours.
Prerequisite: MATH 566 or equivalent.
In-depth study of homotopy and homology. The theory of cohomology is also introduced as are characteristic classes.

MATH 663 General Topology I. Three hours.
Prerequisite: MATH 565 or permission of the department.
Typical topics covered in this course include countable and uncountable sets; axiom of choice; well-ordered sets; connectedness and compactness; countability and separation axioms; Tychonoff's theorem; fundamental group; and covering spaces.

MATH 664 General Topology II. Three hours.
Prerequisite: MATH 663.
Topics of interest to the instructor will be introduced.

MATH 665 Topological Structures I. Three hours.
Prerequisite: Permission of the department.
Topics covered in previous courses include selected works of Pontryagin.

MATH 669 Seminar: Topics in Topology. One to three hours.

MATH 674 Abstract Algebra II. Three hours.
Prerequisite: MATH 573 or equivalent.
Fundamental aspects of ring theory are covered. Topics include Artinian rings, Wedderburn's theorem, idempotents, polynomial rings, matrix rings, Noetherian rings, free and projective modules, and invariant basis number.

MATH 677 Topics in Algebra I. Three hours.
Prerequisite: Permission of the department.
Content decided by instructor. Recent topics covered include linear groups, representation theory, commutative algebra and algebraic geometry, algebraic K-theory, and theory of polycyclic groups.

MATH 679 Seminar: Topics in Algebra. One to three hours.

MATH 681 Real Analysis II. Three hours.
Prerequisite: MATH 580.
Topics covered include basic theory of LP spaces, convolutions, Hahn decomposition, the Radon-Nikodym theorem, Riesz representation theorem, and introduction to Banach spaces.

MATH 684 Complex Analysis II. Three hours.
Prerequisite: MATH 583 or permission of the department.
Typical topics covered include analytic functions, the Riemann mapping theorem, harmonic and subharmonic functions, the Dirichlet problem, Bloch's theorem, Schottley's theorem, and Picard's theorems.

MATH 686 Functional Analysis I. Three hours.
Prerequisites: MATH 681 and a course in complex analysis.
Topics covered in recent courses include Hilbert spaces, Riesz theorem, orthonormal bases, Banach spaces, Hahn-Banach theorem, open-mapping theorem, bounded operators, and locally convex spaces.

**MATH 687 Functional Analysis II.** Three hours.
Prerequisite: MATH 686.
Topics covered in recent courses include spectral theory, Banach algebras, C* algebras, nest algebras, Sobolev spaces, linear p.d.e.'s, interpolation theory, and approximation theory.

**MATH 688 Seminar: Topics in Analysis.** One to three hours.

**MATH 689 Seminar: Topics in Functional Analysis.** One to three hours.

**MATH 698 Research Not Related to Dissertation.** One to nine hours.

**MATH 699 Dissertation Research.** One to twelve hours.
6.15 DEPARTMENT OF MODERN LANGUAGES AND CLASSICS (GN, ROFR, ROML, ROSP)
Chairperson: Professor Thomas Fox, Office: 200 B. B. Comer Hall

Admission Requirements
General requirements for admission to the Graduate School are set forth in the Admission Criteria section of this catalog. All applicants to graduate degree programs in the Department of Modern Languages and Classics must submit a writing sample in support of the application. Applicants to any French or Spanish track must also submit an entrance exam score, either the Graduate Record Exam or the Miller Analogies Test. Applicants to any German concentration are not required to submit an entrance exam score, unless the applicant wants to be considered for additional financial support in the form of an enhanced assistantship or fellowship. Applications for both full-time and part-time status are welcome. All applicants seeking full-time student status are considered for financial support in the form of a Graduate Teaching Assistantship.

For students with deficiencies in undergraduate preparation, admission may be contingent upon completion of designated undergraduate requirements. (In particular, all three tracks of the master of arts program in German, as described below, presuppose completion of an undergraduate survey of German literature or a survey of German culture/civilization that includes a substantial literary component. Students lacking this requirement who are nevertheless admitted to the German master of arts program must make up this course concurrent with their other coursework.)

Qualified students who are holders of an appropriate undergraduate degree may be admitted directly to the doctoral program in Romance languages. However, in such circumstances completion of all requirements for the appropriate master of arts program, including comprehensive testing and subsequent awarding of the master of arts degree, will be a prerequisite for completion of the doctoral degree.

Qualified students can seek dual admission to the School of Law and to any master of arts program offered in the Department of Modern Languages and Classics. If admitted to both, the student will be exempted from at least 6 hours of coursework for the juris doctor degree.

Degree Requirements
The Department of Modern Languages and Classics offers degree programs leading to the master of arts in German, the master of arts in Romance languages, and the doctor of philosophy in Romance languages. All three degree programs incorporate a variety of options (see below). General information is in the Degree Requirements section of this catalog.

Master of Arts in German. Three concentrations are available:

**German literature.** Plan I (24 hours of coursework and a thesis) or Plan II (30 hours of coursework, no thesis). In addition to German literature courses, students must take GN 510 History of the German Language and 3 hours of Middle High German. With the approval of the German graduate advisor, 6 hours of graduate work in a related field may be applied to the degree.

**Germanic philology.** Plan I (24 hours of coursework and a thesis) or Plan II (30 hours of coursework, no thesis). In addition to philology courses, students must take 6 hours of German literature. With the approval of the German graduate advisor, 9 hours of graduate work in a related field may be applied to the degree. EN 622 Old English may count as a German course for candidates in this concentration. The concentration and courses in Germanic philology are offered subject to availability of qualified faculty.
**German studies.** Plan I (24 hours of coursework and a thesis) or Plan II (30 hours of coursework, no thesis). Students must take 15 hours of German literature/culture and philology courses, 3 hours in German history, and one 3-hour interdisciplinary seminar. With the approval of the German graduate advisor, 9 hours of graduate work in a related field may be applied to the degree.

Regardless of concentration, all graduate teaching assistants must enroll in the teaching practicum, currently offered under GN 551/GN 552. Upon completing coursework for any of the three concentrations in German, a student must pass a comprehensive examination based on the coursework and on a pre-established reading list. For information regarding the examination, please contact the German graduate advisor.

A student who chooses to write a thesis must enroll for six hours of Thesis Research (GN 599) with the appropriate thesis director and will defend the thesis orally.

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**Master of Arts in Romance languages.** A single degree program incorporates a variety of options and tracks:

There are three options: the French Option, the Spanish Option, and the Romance Languages Option (which combines languages). All three options have thesis and nonthesis tracks. The French and Spanish options also allow for an applied linguistics track (thesis or nonthesis). Regardless of the option or track, all new graduate teaching assistants must enroll for the Practicum in Applied Linguistics (either FR 512 or SP 502).

All tracks include a six-part comprehensive exam. However, the configuration of the exam is specific to each track, as indicated below.

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**Non-thesis tracks of the Master of Arts in Romance languages** (Plan II). A description of the typical configuration for the various nonthesis tracks of the master of arts in Romance language follows. Included in all nonthesis tracks of the master of arts in Romance languages is a core of five courses in the five areas listed below:

- Teaching Practicum/Topics in Linguistics
- Proseminar: Research Methodology/Critical Theory
- Topics in Culture and Civilization
- Graduate Seminar
- Special Topics/Directed Readings

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**French Option, standard track without thesis** (Plan II). Curriculum requirements: 33 hours of coursework, including at least one course in five of the following six fields:

- Medieval and Renaissance
- Early modern (17th and 18th centuries)
- 19th century
- 20th and 21st centuries
- Francophone and French studies
- French linguistics

Appropriate courses taken in these fields will simultaneously fulfill the Romance languages core requirements listed above. Students must pass a comprehensive examination based on their coursework in the five fields of study. However, for the written component of the exam, students may be exempted from examination in a maximum of two fields in two ways: either by writing a research paper in the field and presenting it at a professional conference or by satisfactorily completing two courses in the field, earning a grade of "A" or "B." Success on the written component precedes the oral component of the exam, which involves generating an oral presentation on a topic indicated in advance.

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**French Option, applied linguistics track without thesis** (Plan II). Curriculum requirements: 36 hours of coursework. The applied linguistics track involves three
components: language, linguistics, and applied linguistics. The language component consists of 21 hours of course credit in French language, literature, and/or culture. The linguistics component is comprised of a 3-hour descriptive linguistics course (FR 561). The applied linguistics component consists of 12 hours of coursework in second language acquisition pedagogy and research (FR 512 and three of the following: FR 513, FR 515, RL 523, EN 613, or other approved courses). Based on the advice of the graduate advisor, appropriate courses taken in these components will simultaneously fulfill the Romance languages core requirements listed above. Degree requirements include success on a comprehensive examination, which is based on the coursework. From the selection of questions provided, the candidate must generate six written answers (two pertaining to applied linguistics, one pertaining to French linguistics, and three pertaining to electives).

**Spanish Option, Hispanic literature track without thesis** (Plan II). Curriculum requirements: 30 hours of coursework, including one course in each of the following areas, and two courses in Hispanic linguistics (courses in transatlantic studies can count as either modern peninsular or Latin American):
- Golden Age
- 19th-century peninsular
- 20th- and 21st-century peninsular
- Colonial Latin America
- 19th-century Latin America
- 20th- and 21st-century Latin America
- US Latino studies

It is mandatory to earn 27 credits within the Spanish program. Optionally, three credits may be earned outside the Spanish program. Based on the advice of the graduate advisor, appropriate courses taken in these components will simultaneously fulfill the Romance languages core requirements listed above. Degree requirements include success on the written comprehensive examination. No oral component is required. The six-part written examination will be based both on coursework and a reading list in each area. Students are required to take exams in the following areas: either three Peninsular areas (of the student's choosing) and two Latin American areas (of the student's choosing) or vice versa, and one area of linguistics. From the selection of questions provided, the candidate must generate six written answers. It is the student's responsibility to keep syllabi from each course on file for reference.

**Spanish Option, applied linguistics track without thesis** (Plan II). Curriculum requirements: 36 hours of coursework. The applied linguistics track involves three components: language, linguistics, and applied linguistics. The language component consists of 21 hours of course credit in Spanish language, literature, and culture (a minimum of 6 hours must be in peninsular literature and 6 hours in Latin-American literature). The linguistics component is comprised of a 3-hour descriptive linguistics course (SP 556). The applied linguistics component consists of 12 hours of coursework in second language acquisition pedagogy and research (SP 502 and three of the following: SP 523, SP 581, RL 513, EN 613, or other approved courses). Based on the advice of the graduate advisor, appropriate courses taken in these components will simultaneously fulfill the Romance languages core requirements listed above. Degree requirements include success on a comprehensive examination, which is based on the coursework. From the selection of questions provided, the candidate must generate six written answers (two pertaining to applied linguistics, one pertaining to Spanish linguistics, one pertaining to peninsular literature, one pertaining to Latin American literature, and one pertaining to an elective).

**Romance Languages Option, without thesis** (Plan II). Curriculum requirements: 30 - 36 hours of coursework. The curriculum requires study of French and Spanish, one as the major and one as the minor. The major includes a minimum of 18 hours. The minor includes a minimum of 12 hours. More than the minimum is recommended for both the major and the minor. Graduate courses in Italian studies are also available on occasion (see the RL prefix in course listings below). Based on the advice of the graduate advisor, appropriate courses
taken in these components will simultaneously fulfill the Romance languages core requirements listed above. Degree requirements include success on a comprehensive examination, which is based on the coursework. From the selection of questions provided, the candidate must generate six written answers (four pertaining to the major and two pertaining to the minor; however, if the candidate has 18 or more hours in both French and Spanish, then the candidate will generate three written answers for each).

**Thesis tracks of the Master of Arts in Romance languages** (Plan I). A description of the typical configuration for the various thesis tracks of the master of arts in Romance language follows. The Romance languages core requirements do not apply to thesis tracks.

**French Option, standard track with thesis** (Plan I). Curriculum requirements: 27 hours of coursework and a thesis, including at least one course in five of the following six fields:
- Medieval and Renaissance
- Early modern (17th and 18th centuries)
- 19th century
- 20th and 21st centuries
- Francophone and French studies
- French linguistics

Students must pass a comprehensive examination based on their coursework in the five fields of study. However, for the written component of the exam, students may be exempted from examination in a maximum of two fields in three ways: first, by writing a thesis in the field; second, by writing a research paper in the field and presenting it at a professional conference; or third, by satisfactorily completing two courses in the field, earning a grade of "A" or "B."

Success on the written component precedes the oral component of the exam, which involves generating an oral presentation on a topic indicated in advance. Six hours of Thesis Research (FR 599) with the thesis director are required beyond the 27 hours of coursework.

**French Option, applied linguistics track with thesis** (Plan I). Curriculum requirements: 30 hours of coursework and a thesis. In addition to the thesis, the applied linguistics track involves three components: language, linguistics, and applied linguistics. The language component consists of 15 hours of course credit in French language, literature, and/or culture. The linguistics component is comprised of a 3-hour descriptive linguistics course (FR 561). The applied linguistics component consists of 12 hours of coursework in second language acquisition pedagogy and research (FR 512 and three of the following: FR 513, FR 515, RL 523, EN 613, or other approved courses). Degree requirements include success on a comprehensive examination, which is based on the coursework. From the selection of questions provided, the candidate must generate six written answers (two pertaining to applied linguistics, one pertaining to French linguistics, and three pertaining to electives). Six hours of Thesis Research (FR 599) with the thesis director are required beyond the 30 hours of coursework.

**Spanish Option, Hispanic literature track with thesis** (Plan I). Curriculum requirements: 24 hours of coursework and a thesis, including at least one course in each of the following eight fields (courses in transatlantic studies can count as either modern peninsular or Latin American):
- Golden Age
- 19th-century peninsular
- 20th- and 21st-century peninsular
- Colonial Latin America
- 19th-century Latin America
- 20th- and 21st-century Latin America
- US Latino studies
- Hispanic linguistics

In consultation with the Spanish graduate advisor, each student must also select a special area of interest in Hispanic literature in order to write the thesis. Degree requirements include success on the written comprehensive examination. No oral component is required. The six-
part written examination will be based both on coursework and a reading list in each area. Students are required to take exams in the following areas: either three Peninsular areas (of the student's choosing) and two Latin American areas (of the student's choosing) or vice versa, and one area of linguistics. From the selection of questions provided, the candidate must generate six written answers. Six hours of Thesis Research (SP 599) with the thesis director are required beyond the 24 hours of coursework. It is the student's responsibility to keep syllabi from each course on file for reference.

**Spanish Option, applied linguistics track with thesis** (Plan I). Curriculum requirements: 30 hours of coursework and a thesis. In addition to the thesis, the applied linguistics track involves three components: language, linguistics, and applied linguistics. The language component consists of 15 hours of course credit in Spanish language, literature, and culture (a minimum of 6 hours must be in peninsular literature and 6 hours in Latin-American literature). The linguistics component is comprised of a 3-hour descriptive linguistics course (SP 556). The applied linguistics component consists of 12 hours of coursework in second language acquisition pedagogy and research (SP 502 and three of the following: SP 523, SP 581, RL 513, EN 613, or other approved courses). Degree requirements include success on a comprehensive examination, which is based on the coursework. From the selection of questions provided, the candidate must generate six written answers (two pertaining to applied linguistics, one pertaining to Spanish linguistics, one pertaining to peninsular literature, one pertaining to Latin American literature, and one pertaining to an elective). Six hours of Thesis Research (SP 599) with the thesis director are required beyond the 30 hours of coursework.

**Romance Languages Option, with thesis** (Plan I). Curriculum requirements: 24 - 30 hours of coursework and a thesis. The curriculum requires study of French and Spanish, one as the major and one as the minor. The major includes a minimum of 18 hours. The minor includes a minimum of 12 hours. More than the minimum is recommended for both the major and the minor. Graduate courses in Italian studies are also available on occasion (see the RL prefix in course listings below). Degree requirements include success on written and oral comprehensive examinations. All examinations are based on the coursework. From the selection of questions provided, the candidate must generate six written answers (four pertaining to the major and two pertaining to the minor; however, if the candidate has 18 or more hours in both French and Spanish, then the candidate will generate three written answers for each). Six hours of Thesis Research (FR 599, SP 599 or RL 599) with the thesis director(s) are required beyond the coursework.

**Doctor of Philosophy in Romance Languages**

**Degree Requirements**

The student's **Plan of Study** for the **PhD degree** must be approved by the department and the Graduate School by the time the student completes 30 graduate semester hours of UA and/or transfer coursework. In addition to the program-specific requirements presented below, all doctoral candidates, regardless of the option selected, must adhere to the following.

The minimal formal coursework required is 60 semester hours, which may include up to 30 hours of transferred credits earned at another institution. Appropriate MA hours earned at The University of Alabama can also count toward the total required accumulation of hours. Students who have completed a master's thesis need accumulate only 54 hours of coursework. Once all coursework is completed, an additional 24 hours of Dissertation Research (FR 699, SP 699 or RL 699) with the dissertation director(s) are required. All doctoral candidates must possess reading knowledge of one language in addition to English, their native language, and their language of specialization.

It is strongly recommended that, before the termination of studies, all doctoral candidates reside for a period in a country or location requiring constant interaction in the language of specialization.
All doctoral candidates must be careful to fulfill the **residency requirement** and to abide by the specified **time limits** (7 years from admission semester; 8 years from admission semester if entering directly from BA) specified in the **Degree Requirements** of this catalog. Once enrolled, all doctoral candidates must submit a **Plan of Study** to the Office of the Graduate School and abide by all other policies of the Graduate School.

All options of the Doctor of Philosophy in Romance Languages share the same qualifying exam format. This format begins with the creation of a “pre-prospectus” by the candidate, in consultation with the likely eventual dissertation director, followed by take-home questions from a committee of examiners with whom the candidate has had coursework or who have appropriate expertise (the questions may pertain to the coursework or the pre-prospectus, according to the discretion of each examiner), leading directly to the creation of the prospectus as the final product, assuming a successful outcome. The prospectus is then submitted to the prospective dissertation committee for approval.

Regardless of the option, all new graduate teaching assistants must enroll for the appropriate teaching practicum, either FR 512 or SP 502.

Candidates interested in a linguistics-oriented curriculum should direct their attention to the Romance Languages Option.

**Three options are available in the doctoral program:**

**French Option.** The curriculum is centered on French, though up to 12 hours of coursework in a related discipline is admissible. All new graduate teaching assistants must take FR 512. All candidates must take at least one course from four of the following fields (above and beyond the hours earned for the MA):
- Medieval and Renaissance
- Early modern (17th and 18th centuries)
- 19th century
- 20th and 21st centuries
- Francophone and French studies
- French linguistics

A course in literary theory is also required. Additional coursework will normally be geared toward the anticipated area of specialization for the dissertation. At the conclusion of the coursework, a qualifying examination and the approval of a prospectus outlining the proposed research topic must take place before work on the dissertation can begin.

**Spanish Option.** The curriculum is centered on Spanish, though up to 12 hours of coursework in a related discipline is admissible. All new graduate teaching assistants must take SP 502. All candidates must take at least one course from four of the following fields (above and beyond the hours earned for the MA):
- 16th-17th century peninsular (Golden Age)
- 19th-century peninsular
- 20th- and 21st-century peninsular
- Colonial Latin American
- 19th-century Latin American
- 20th- and 21st-century Latin American
- US Latino studies
- Transatlantic studies

A course in literary theory is also required. Additional coursework will normally be geared toward the anticipated area of specialization for the dissertation. At the conclusion of the coursework, a qualifying examination and the approval of a prospectus outlining the proposed research topic must take place before work on the dissertation can begin.

**Romance Languages Option.** The Romance languages option allows for interdisciplinary work tailored according to the needs of the candidate, in consultation with the appropriate advisors. The goal is to meet the interests and career requirements of the candidate by utilizing the full resources of the department and of cognate graduate programs offered by
the University. Regardless of the curriculum, the Romance languages option must conform to the following structure:

All Romance languages option students must major in either French or Spanish.

All Romance languages option students must have, in addition to the major in French or Spanish, either

a) an 18-hour minor in another discipline, or  
b) a second major in French or Spanish, or  
c) a second, 30-hour concentration in linguistics

All Romance languages options students choosing the 18-hour minor must also include in their coursework (above and beyond the hours earned for the MA) at least one additional course in four of the five following main fields in their major:

For Spanish (courses in transatlantic studies can count as either modern peninsular or Latin American)

   Golden Age  
   19th-century peninsular  
   20th- and 21st-century peninsular  
   Colonial Latin America, or 19th-century Latin America  
   20th- and 21st-century Latin America, or US Latino studies

For French

   Medieval and Renaissance  
   Early modern (17th and 18th centuries)  
   19th century  
   20th and 21st centuries  
   Francophone and French studies

A course in literary theory is also required. Additional coursework will normally be geared toward the anticipated area of specialization for the dissertation.

The 18-hour minor can be in any field for which a feasible curriculum can be assembled (French, Spanish, German, Latin-American studies, Italian studies, Renaissance studies, English, TESOL, linguistics, etc.). A feasible curriculum is defined as any curriculum for which the appropriate coursework at The University of Alabama is readily available and accessible and for which the candidate has the commensurate background. Up to 12 of the 18 hours in the minor may be transferred from previous MA coursework conducted on another campus. The full 18 hours can be transferred from a previous MA earned at The University of Alabama.

All Romance language option students choosing the double major have maximal flexibility in course selection. There is no slate of required courses for either of the two majors. The candidate must simply amass 30 hours (including transferred MA hours) in each of the two languages. However, the requirement of taking either the French or the Spanish teaching practicum for all new GTAs remains in force (FR 512 or SP 502), and a course in either literary theory or linguistic research methods, as appropriate to the student’s curricular orientation and the direction of the anticipated dissertation, also remains in force. A maximum of 18 hours in either language (French or Spanish) can be transferred from a prior MA to satisfy requirements towards either major in the double-major track.

For students seeking a linguistics-oriented curriculum, a 30-hour, interprogrammatic concentration in linguistics, in addition to the major in French or Spanish, is an alternative option. For those students opting for the 30-hour concentration in linguistics (including transferred MA credits), the coursework for the major in French or Spanish, which must also comprise a minimum of 30 hours (including transferred MA credits), is not constrained and may include any combination of courses. The coursework for the concentration in linguistics will be determined in consultation with the appropriate graduate advisor. However, a course in linguistic research methods is required. In most cases, the greater part of the linguistics curriculum will be in the area of applied linguistics because graduate coursework in that area is available on a consistent basis in the Department of Modern Languages and Classics as well as in the Department of English and in the College of Education. Some graduate courses in
descriptive and theoretical linguistics are also available in the modern languages department and in the departments of English and anthropology. On occasion, appropriate linguistics coursework is also available in the Department of Communicative Disorders, the Department of Communication Studies, and elsewhere.

Some courses can be used to simultaneously satisfy requirements for both the major and the 18-hour minor. For example, a student majoring in French and minoring in Renaissance studies can use a French course on the Renaissance to satisfy requirements for both the major and the minor. Some courses can be counted as either part of the major or part of the linguistics concentration, depending upon the student's programmatic needs. For example, a student majoring in Spanish and having a 30-hour linguistics concentration can count a course on Spanish linguistics as either part of the major or part of the linguistics concentration in order to free up additional hours in the category that best serves the student's programmatic needs. In all cases, a minimum of 60 hours of graduate credit must be accumulated (54 hours for students with an MA thesis).

**Course Descriptions**

**French (FR)**

**FR 501 Reading Proficiency in French I.** Three hours, no credit awarded. Introduction to French grammar and vocabulary, with emphasis on developing basic reading and translation skills.

**FR 502 Reading Proficiency in French II.** Three hours, no credit awarded. Prerequisite: FR 501 or permission of the instructor. Continued study of grammar and vocabulary, with emphasis on further developing reading and translation skills.

**FR 511 Research Methodology.** Three hours. Basic research tools and techniques.

**FR 512 Practicum: Applied Linguistics.** Three hours. The analysis and various practical applications of selected teaching techniques.

**FR 513 Research Methods in French Applied Linguistics.** Three hours. Quantitative and qualitative approaches to second language acquisition research and related techniques. The student will design a procedure based on a research question in relation to the teaching of French. The student will learn to use data collection instruments, to explore theoretical orientations, and to formulate a detailed data analysis plan. May be repeated for credit when topics vary.

**FR 515 Topics in Second Language Acquisition.** Three hours. Analysis of major issues, theories, research findings and their implications for teaching. Examples: second language reading, classroom language acquisition. May be repeated for credit when topics vary.

**FR 521 Pronunciation and Phonetics.** Three hours. Introduction to phonetic theory and corrective phonetics aimed at mastery of French pronunciation. Instruction on the articulation of the sounds of French, the phonetic transcription of French, and the correspondence between the sounds of French and its standard orthography. Frequent practice exercises.

**FR 531 Francophone Africa.** Three hours. Prominent themes of the African experience, seen through the eyes of Francophone authors and cinematographers of the Maghreb, sub-Saharan Africa, and the diaspora; dialectal and sociolinguistic considerations.

**FR 533 Topics in French Culture and Civilization.** Three hours.
Study of French artistic heritage and development of social and political institutions. May be repeated for credit when topics vary.

**FR 545 17th-Century French Literature I.** Three hours. Prose writings of the 17th century, including but not limited to the philosophical works of Descartes and Pascal and the novels of Madame de Lafayette.

**FR 546 17th-Century French Literature II.** Three hours. Verse writings of the 17th century, including but not limited to the pre-classical poets (such as Saint-Amant and de Viau) and the dramatic works in verse (such as the plays of Corneille, Molière, and Racine).

**FR 547 Special Topics in 18th-Century French Literature.** Three hours. A selection of the important texts of the period. Lectures and discussion. May be repeated for credit when topics vary.

**FR 548 18th Century: The Philosophe Movement.** Three hours. Intellectual prose of the Enlightenment. Lectures and discussion.

**FR 551 19th-Century French Novel.** Three hours. Close readings of the novel alongside studies in Romanticism, realism, naturalism, symbolism, and Décadence. Novelists, works, and movements of the period including the following: Chateaubriand, Mme de Staël, Stendhal, Balzac, Hugo, Sand, Flaubert, Zola, Huysmans. May be repeated for credit when topics vary.

**FR 552 Special Topics in 19th-Century French Literature.** Three hours. Readings in poetry, theatre, and prose, either genre-specific or in combination, generally focusing on the first or latter half of the century in order to consider movements in literary thought. May be repeated for credit when topics vary.

**FR 553 20th-Century French Novel.** Three hours. Major novelists of the period and their works. Reading and discussion of complete texts; lectures and reports.


**FR 555 Québécois Literature and Culture.** Three hours. A study of the history, culture, and literature of Québec and French Canada, with emphasis on the modern period.

**FR 561 French Linguistics.** Three hours. Linguistic theory applied to the analysis and description of French phonological, morphological, syntactic, and lexical systems. Tendencies of change in contemporary French. Dialect areas.

**FR 563 French-English Translation.** Three hours. Study of the problems of translation and of translation strategies addressing them, in connection with relevant theoretical approaches.

**FR 570 Graduate Seminar.** Three hours. In depth study of French or Francophone literature, linguistics, civilization, or a combination. Examples: Francophone Louisiana, French Cinema. Emphasis on research and analytic skills. May be repeated for credit when topics vary.

**FR 580 Special Topics.** Three hours. Special topics in relation to French or Francophone literature, linguistics, civilization, or a combination. Emphasis on research and analytic skills. May be repeated for credit when topics vary.
**FR 590 Directed Readings /Directed Study.** Three hours. Permission of the instructor required before enrolling. Subject matter varies. May be repeated for credit.

**FR 598 Nonthesis Research.** Variable credit. Permission of the French graduate advisor required before enrolling.

**FR 599 Thesis Research.** Variable credit. May be repeated for six hours.

**FR 643 Poetry of the French Renaissance.** Three hours. Major poets of the Renaissance, with emphasis on Marot, Scève, Louise Labé, du Bellay, Ronsard.

**FR 644 Narratives of the French Renaissance.** Three hours. A study of major works, including Rabelais and Montaigne.

**FR 670 Graduate Seminar.** Three hours. Subject may be in French literature, linguistics, civilization, or a combination. May be repeated for credit when topics vary.

**FR 680 Special Topics.** Variable credit. Directed reading and/or research. May take the form of either a graduate seminar or individual research, as circumstances warrant. May be repeated for credit when topics vary.

**FR 699 Dissertation Research.** Variable credit.

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**German (GN)**

GN 551, GN 552, GN 571, GN 575, and GN 576 may be repeated for credit when the content varies substantially. A period course (GN 515, GN 520, GN 525, GN 530, GN 535, or GN 540) may vary in emphasis during different semesters; when this is the case, students may take the course a second time, but credit for the course may be applied only once toward the minimum hours required for the degree.

**GN 503 German Reading Proficiency I.** Three hours, no credit awarded. Introduction to German grammar and vocabulary, with emphasis on developing basic reading and translation skills.

**GN 504 German Reading Proficiency II.** Three hours, no credit awarded. Prerequisite: GN 503 or permission of the instructor. Continued study of grammar and vocabulary, with emphasis on further developing reading and translation skills.

**GN 510 History of the German Language.** Three hours. The relationship to Indo-European and to the other Germanic dialects; linguistic development from the earliest times to the present.

**GN 514 Teaching Methodology.** Three hours. Analysis of basic concepts and practical applications of foreign language teaching and learning.

**GN 515 Middle High German Language and Literature.** Three hours. Introduction to the language and literature of the Middle High German period.

**GN 516 Topics in Second Language Acquisition.** Three hours. Analysis of major issues and theories in Second Language Acquisition. May be repeated for credit when topics vary.
GN 518  **Historical Linguistics.** Three hours.
An advanced introduction to various levels of historical language change. A variety of language families serve as examples.

GN 520  **Renaissance and Baroque Literature.** Three hours.
Works from the Renaissance (including literature from the Reformation and Humanism) and the Baroque (17th century).

GN 525  **Literature of the Age of Goethe.** Three hours.
Includes the German Enlightenment, Sturm und Drang, Weimar Classicism, and the Romantic movement.

GN 530  **Literature of the Age of Realism.** Three hours.
Includes Biedermeier, Junges Deutschland, Poetic Realism, and Naturalism.

GN 535  **Literature of the Early 20th Century.** Three hours.
Includes the Jahrhundertwende, Expressionism, Neue Sachlichkeit, Exilliteratur, and literature of the Third Reich.

GN 540  **Literature after 1945.** Three hours.
Literature of the German-speaking world in the post-World War II era.

GN 551  **Special Problems and Directed Readings.** Three hours.
Permission of the instructor required before enrolling. Special topics chosen by students in conference with the instructor.

GN 552  **Special Problems and Directed Readings.** Three hours.
Permission of the instructor required before enrolling. Special topics chosen by students in conference with the instructor.

GN 571  **Seminar in Selected Authors.** Three hours.
Students will normally give reports and write at least one research paper.

GN 575  **Seminar in a Literary Genre.** Three hours.
Students will normally give reports and write at least one research paper.

GN 576  **Seminar on a Literary Theme.** Three hours.
Students will normally give reports and write at least one research paper.

GN 599  **Thesis Research.** Variable credit.

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**Romance Languages (RL)**

RL 513  **Research Methods in Applied Linguistics.** Three hours.
Quantitative and qualitative approaches to second language acquisition research and related techniques. The student will design a procedure based on a research question in relation to the teaching of language. The student will learn to use data collection instruments, to explore theoretical orientations, and to formulate a detailed data analysis plan. May be repeated for credit when topics vary.

RL 518  **Historical Linguistics.** Three hours.
An advanced introduction to various levels of historical language change. A variety of language families serve as examples.

RL 523  **Quantitative Methods in Linguistics Research.** Three hours.
Introduction to statistical methods that are commonly used in quantitative linguistics research, to prepare students to understand published research findings and conduct field research projects. Repeatable for credit when curriculum varies.
**RL 557 Critical Theory.** Three hours.
Study and critical application of literary theory.

**RL 570 Graduate Seminar.** Three hours.
Topics may be in literature, linguistics, civilization, or a combination. Topics may pertain solely to one or more of the Romance languages or to an array of languages including one or more of the Romance languages. May be repeated for credit when topics vary.

**RL 580 Special Topics.** Three hours.
Topics may be in literature, linguistics, civilization, or a combination. Topics may pertain solely to one or more of the Romance languages or to an array of languages including one or more of the Romance languages. May be repeated for credit when topics vary.

**RL 598 Nonthesis Research.** Variable credit.
Permission of the appropriate graduate advisor required before enrolling.

**RL 599 Thesis Research.** Variable credit.
May be repeated for six hours.

**RL 680 Special Topics.** Variable credit.
Topics may be interdisciplinary or language-specific. A three-hour special topics course in Italian or Italian studies is offered on occasion. May be repeated for credit when topics vary.

**RL 699 Dissertation Research.** Variable credit.

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**Spanish (SP)**

**SP 502 Practicum: Applied Linguistics.** Three hours.
In-depth analysis of fundamental concepts in foreign language learning and teaching. Topics include grammar and vocabulary acquisition, classroom discourse, reading and listening comprehension, writing and principles of language testing.

**SP 503 Reading Proficiency in Spanish I.** Three hours, no credit awarded.
Introduction to Spanish grammar and vocabulary, with emphasis on developing basic reading and translation skills.

**SP 504 Reading Proficiency in Spanish II.** Three hours, no credit awarded.
Prerequisite: SP 503 or permission of the instructor.
Continued study of grammar and vocabulary, with emphasis on further developing reading and translation skills.

**SP 515 Latin-American Colonial Texts.** Three hours.
In-depth study of texts from the colonial period, with emphasis on colonialism and the role of writing in colonization and decolonization. May be repeated for credit when the content varies substantially.

**SP 516 19th-Century Latin-American Literature I.** Three hours.
In-depth study of major literary works of the period, with emphasis on Romanticism, social Realism, and Romantic realism. Readings may vary. May be repeated for credit.

**SP 517 19th-Century Latin-American Literature II.** Three hours.
In-depth study of major literary works of the period, with emphasis on naturalism and *modernismo* (Martí, Dario, etc.). May be repeated for credit when topics vary.

**SP 518 20th- and 21st-Century Latin-American Novel.** Three hours.
A study of the Latin American novel from the Vanguard to the 21st century. Readings may vary. May be repeated for credit when topics vary.
SP 519 20th- and 21st-Century Latin-American Poetry. Three hours. A panoramic approach to the most important movements and particular poetic voices from the Avant Garde period to the present, including authors such as Nicolás Guillén, Nicanor Parra, Lezama Lima, Juan Gelman, Alejandra Pizarnik, Olga Orozco, Tamara Kamentzain, Rosario Castellanos, Gioconda Belli, Alicia Genovese, Nestor Perlongher.

SP 520 18th-Century Spanish Literature. Three hours. Subject matter varies but will consist of some combination of the following areas: poetry, theatre, and prose works representing the different literary tendencies of the 18th century as well as the ideological issues of the period.

SP 521 19th-Century Spanish Prose. Three hours. Reading and discussion of complete texts representative of the literary movements of the period; lectures and reports.

SP 523 Quantitative Methods in Hispanic Linguistics Research. Three hours. Introduction to statistical methods that are commonly used in quantitative linguistics research, including Hispanic linguistics, to prepare students to understand published research findings and conduct field research projects focusing on Hispanic linguistics. Repeatable for credit when curriculum varies.

SP 526 20th-Century Spanish Literature, Post-Civil War. Three hours. Reading and discussion of texts representative of the literary movements of the period. Lectures, discussions, and reports. May be repeated for credit when topics vary.

SP 534 Latin-American Theatre. Three hours. A study of the development of the Latin-American theatre from its origins to the present, with emphasis on 20th-century authors such as Florencio Sánchez and Rodolfo Usigli.

SP 538 Latin-American Short Story. Three hours. The theory of short fiction, as well as particularities of the genre in Latin America, based on the narrative models of Jorge Luis Borges, Julio Cortázar, Juan José Arreola, Virgilio Piñera, and Horacio Quiroga.

SP 556 Introduction to Spanish Linguistics. Three hours. Linguistic theory applied to the analysis of the Spanish language. Topics include phonology, morphology, syntax, semantics, and language change and variation.

SP 570 Special Topics in Spanish Linguistics. Three hours. Topics may be theoretical, applied or descriptive in nature, or a combination, and may be narrowly focused or may pertain to a wide variety of dialects. Application of various theoretical, critical and methodological approaches. May be repeated for credit when topics vary.

SP 580 Seminar in Spanish Linguistics. Three hours. The focus of the seminar may be theoretical, descriptive, applied, or a combination. May be repeated for credit when topics vary.

SP 581 Topics in Second Language Acquisition. Three hours. Analysis of major issues, theories, research findings, and their implications for teaching. Examples: second language reading, classroom language acquisition, input/output, acquisition of pragmatics. May be repeated for credit when topics vary.

SP 584 Spanish Phonetics and Dialectology. Three hours. Detailed examination of Spanish phonetics, including dialectal variations.

SP 590 Open Topics. Three hours. Subject matter varies. May be repeated for credit when topics vary.

SP 591 Cervantes. Three hours. Works of Cervantes.
SP 593 16th-Century Peninsular Literature. Three hours. Reading and discussion of selected works of the period.

SP 594 17th-Century Peninsular Literature. Three hours. Reading and discussion of selected works of the period.

SP 598 Nonthesis Research. Variable credit. Permission of the Spanish graduate advisor required before enrolling.

SP 599 Thesis Research. Variable credit. May be repeated for six hours.

SP 600 Directed Readings or Research. Variable credit. Permission of the instructor required before enrolling.

SP 689 Seminar in Latin-American Literature. Three hours. May be repeated for credit when topics vary.

SP 690 Seminar in Spanish Literature. Three hours. May be repeated for credit when topics vary.

SP 699 Dissertation Research. Variable credit.
The School of Music is an accredited member of the National Association of Schools of Music, and all of its programs and policies are in accordance with NASM requirements. The School offers the doctor of musical arts degree (DMA) with concentrations in composition, performance, choral conducting, and wind conducting. Secondary concentrations may be earned in conjunction with any of the DMA concentrations. Descriptions of these curricula may be found in the *Graduate Handbook of the School of Music*. The master of music (MM) degree is offered with concentrations in performance, composition, musicology, theory, choral conducting, wind conducting, and church music. Program outlines are available from the School upon request.

The College of Education offers the MA, the Ed.S., the Ed.D., and the Ph.D. in Secondary Education (Music Education emphasis). Information concerning these degrees will be found in this catalog in the *College of Education* section.

**Requirements for Admission**

All courses of graduate music study must meet the general requirements of the Graduate School as given in the *Admission Criteria* section of this catalog. In addition, the School of Music imposes the following special requirements:

**For the MM Degree**

The bachelor of music degree in the chosen field of study from The University of Alabama or the equivalent from another accredited institution.

In special cases, a student holding the bachelor's degree but without a formal major in the chosen field may be admitted by examination.

All students must take examinations in music history and music theory prior to initial registration. Any required courses or other work specified as a result of deficiencies revealed in these examinations must be completed by the end of the first Fall semester after matriculation. A schedule of remediation will be determined by appropriate faculty and the director of graduate studies in music and may include enrollment in MUS 595 Graduate Theory Review and/or MUS 591 Graduate History Review. Students may not earn graduate credit in theory and history until all deficiencies in the respective areas have been removed.

Any deficiencies revealed by analysis of undergraduate transcripts prior to enrollment must be removed within one year of initial enrollment.

Information about the entrance examinations may be obtained from the director of graduate studies in music.

**Individual Area Requirements:**

**For the MM Degree**

*Performance.* An audition on the major instrument. A complete repertoire list must be submitted, noting those works prepared for the audition.

*Voice.* The demonstration of a satisfactory vocal technique in the classical style, and satisfactory singing diction and comprehension in French, German, Italian and English.

*Composition.* Submission of a group of original works, including at least one in large form.
**Theory.** Submission of examples of work that illustrate analytical and writing skills. Students must have a reading knowledge of a foreign language (usually German, French, or Italian). Those who do not have this skill at matriculation will be required to remove the deficiency, through the completion of appropriate language courses or by examination, before they are admitted to candidacy.

**Musicology.** Submission of work that illustrates research and writing skills. Students must have a reading knowledge of a foreign language (usually German, French, or Italian). Those who do not have this skill at matriculation will be required to remove the deficiency, through the completion of appropriate language courses or by examination, before they are admitted to candidacy.

**Conducting.** An audition with a University ensemble. Two major works, in contrasting styles, must be conducted. Ear training and sight-singing proficiency must be demonstrated.

**For the DMA Degree**

The student's **Plan of Study** for the DMA degree must be approved by the School of Music and the Graduate School by the time the student completes 30 graduate semester hours of UA and/or transfer course work.

The master of music degree is required from The University of Alabama or the equivalent from another accredited institution. The MM equivalent must include recitals and/or major creative work, as appropriate.

In the performance areas, an audition at the MM level that includes at least 15-20 minutes of performance time is required. It must include representative works drawn from a variety of historical periods. In composition, scores and recordings of original works, together with evidence of public performances, must be submitted.

Diagnostic entrance examinations are required in music history/literature, music theory, and writing skills. Any required course or other work specified as a result of deficiencies revealed in these examinations must be removed by the end of the first Fall semester after matriculation. A schedule of remediation will be determined by appropriate faculty and the director of graduate studies in music and may include enrollment in MUS 595 Graduate Theory Review, MUS 591 Graduate History Review, or MUS 510 Introduction to Graduate Studies in Music. Students may not earn graduate credit in theory or history until all deficiencies in the respective areas have been removed.

Additional information is in the **Degree Requirements** section of this catalog.

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**Degree Requirements:**

**For the MM Degree**

These differ with the area of specialization; a complete outline of requirements in each field is contained in the *Graduate Handbook of the School of Music*, which may be secured from the director of graduate studies in music or may be viewed on the *School of Music* Web page.

Concentrations in musicology, theory, and composition follow Plan I, require a written thesis. A composition student is required to present a recital of original compositions in addition to the thesis. Concentrations in performance, choral conducting, wind conducting, and church music, follow Plan II, which does not require a written thesis but which does require additional course hours and a recital. Concentrations in musicology and theory require a public lecture.

All MM degrees require at least 12 hours in graduate courses in music history and music theory, with at least 6 hours in each. MUS 501 Introduction to Graduate Study in Music must be taken in the first fall semester of enrollment.

MM students under Plan I (thesis) must pass written comprehensive examinations in theory, history, and the major area. A description of the written comprehensive examinations is included in the *Graduate Handbook of the School of Music*. MM students under Plan II (non-thesis) are required to take an oral examination.
All students must pass an oral examination. For students under Plan I, the oral examination will be a defense of the thesis. For students under Plan II, the oral examination will be based on the student's coursework in the MM program and will determine the student's ability to articulate a broader perspective derived from that study. For students following Plan II, the oral examination is the final step in the completion of the degree and is administered only after all other requirements have been completed.

A minimum of 33 semester hours of graduate work is required to complete any MM degree.

**For the DMA Degree**

**Course distribution** (hours required beyond the MM degree).

Major area: 20–25 hours, including document (see below for description)

Theory/music history: 18 hours (minimum of 9 in each area)

Pedagogy: 3–6 hours

Electives: 7 hours

**Recital requirements.** In performance, a minimum of three recitals are required. In conducting there is a requirement for a minimum of three concerts, one of which must be a lecture-recital. In composition, the requirement includes a full recital, or equivalent in length, of music written at the DMA level, exclusive of work done on the document.

**Advisory Committee.** A committee shall be appointed to supervise the student’s program and progress toward the degree. The constitution of the committee is described in the Graduate Handbook of the School of Music.

**Written comprehensive examinations.** All students must pass written comprehensive examinations in the major area. No student may attempt the written comprehensive examination sooner than the first Fall or Spring semester after successful completion of all required MUS courses. A description of the written comprehensive examinations is included in the Graduate Handbook of the School of Music.

**Document.** In performance, choral conducting, and wind conducting, a final project that includes a research and writing component is required. The subject, content, and length of the project must be approved by the student’s advisory committee. The School of Music offers options for the format of the final project; these are described in detail in the School of Music’s Graduate Handbook (available on the School of Music’s website) under “DMA Curriculum Outlines.” In composition, there must be a large original work in an unspecified medium, in addition to and distinct from any work done for degree credit in the DMA program. Every project is subject to approval by the student’s advisory committee. Work is supervised by the major teacher and the student’s advisory committee.

**Public lecture.** In performance and composition, there is a required 50-minute lecture demonstrating the candidate's ability to communicate about the area of specialization.

**Language requirement.** There is no specific language requirement for the DMA. Depending on the student’s academic program, the advisory committee may require proficiency in a foreign language.

**Residency requirement.** A minimum of two consecutive, full-time academic semesters must be spent in residence at the University; one may consist of a full summer, if approved by the advisory committee. A minimum of 18 semester hours must be earned in residence. Only degree credit may be counted toward the 18 hours.

**Individual area degree outlines.** Complete descriptions of the program in each area of specialization for the DMA are contained in the Graduate Handbook of the School of Music; this may be secured by contacting the director of graduate studies in music or may be viewed on the School of Music Web page.

Additional information on requirements for all graduate degrees is found in the Degree Requirements section of this catalog.

http://graduate.ua.edu/catalog/16600.html
Course Descriptions

Music Academics (MUS)

MUS 501 Introduction to Graduate Study in Music. Three hours.
Prerequisite: Permission of the instructor.
An introduction to the basic bibliographic tools and research techniques in music. Offered fall semester.

MUS 502 Film Scoring. Three hours.
Prerequisite: MUS 510 or permission of the instructor.
A study of the art of scoring music for films. The course will examine aesthetics of film scoring and apply it in this course. Offered fall semester.

MUS 503 Advanced Counterpoint: Canon and Fugue. Three hours.
Prerequisite: Permission of the instructor.
The analysis and writing of fugue, ground bass, variation, and canon. Offered spring semesters of even-numbered years.

MUS 504 Introduction to Graduate Music Analysis. Three hours.
Analysis of literature from the 18th through 20th centuries. Analysis focuses on harmonic and contrapuntal techniques, rudimentary linear reduction concepts, harmonic reduction, and form. Offered spring semester.

MUS 505 Studio Techniques in Arranging and Orchestration. Three hours.
Prerequisite: MUS 510 or permission of the instructor.
This course is an approach to arranging and orchestration in both jazz and commercial settings. The emphasis will be placed on writing for the studio orchestra, MIDI instrumentation, and vocal groups with a focus on the 4- to 6-piece group (jazz and commercial). Offered fall semester.

MUS 506 Advanced Piano Accompanying. Two hours.
Accompanying advanced undergraduate or graduate vocalists and instrumentalists in studio, plus a weekly seminar.

MUS 507 Advanced Analysis. Three hours.
Prerequisite: MUS 307 or equivalent.
Detailed study and analysis of selected scores from 1200 to the present. Offered in summer school only.

MUS 510 Advanced Arranging. Three hours.
Prerequisite: MUS 310.
Study of current techniques in arranging, including use of symmetrical scales and chords, pedal points, polytonality, and planing techniques. Offered spring semester.

MUS 511 Analog Electronic Music Techniques. Three hours.
Prerequisite: Permission of the instructor.
Composition using classical analog synthesis, tape recording, editing, and mixing techniques. Offered fall semesters of odd-numbered years.

MUS 512 Digital Synthesis Using C Sound. Three hours.
Prerequisite: Permission of the instructor.
Fundamental concepts of digitally synthesized sound as implemented in C Sound. Offered fall semesters of even-numbered years.

MUS 514 Advanced Electronic Music: Sampling, Analog, and Digital Synthesis. Three hours.
Prerequisite: MUS 511 or permission of the instructor.
Advanced analog recording, editing, and mixing techniques, sampling, and digital synthesizers. Offered spring semesters of even-numbered years.
MUS 515 Seminar in Musicology. Three hours.
Prerequisites: Graduate standing and permission of the instructor.
A survey of developments, methodologies, and bibliographical resources in the field of musicology. Offered according to demand.

MUS 516 Selected Topics in Music Theory and Analysis. Three hours.
Prerequisite: Permission of the instructor.
Selected analytical topics in music theory presented in seminar. Offered spring semester and according to demand.

MUS 518 Schenkerian Analysis. Three hours.
Prerequisite: Permission of the instructor.
Linear and graphic analytical and reductive techniques according to the theoretical constructs, practices, and examples of Heinrich Schenker. Offered fall semesters of odd-numbered years.

MUS 519/MUS 520 Advanced Composition. Three hours (each semester).
Creation of large-scale musical compositions. Offered fall and spring semesters and on demand.

MUS 527/MUS 528 Studies in Special Literature. Three hours (each semester).
Materials vary each semester. May be repeated for credit up to four semesters.

MUS 529 Proseminar in Chamber Music History and Literature. Three hours.
Prerequisite: MUS 307 or equivalent.
Survey of chamber music genres and styles from the 17th to the 20th centuries via discussion and analysis of selected works.

MUS 531 College Teaching: Music in Higher Education. Three hours.
Developing competencies and understandings that will contribute to one's becoming a more effective college music instructor. Offered in summer.

MUS 533 Proseminar in Symphonic Literature. Three hours.
Prerequisite: MUS 307 or equivalent.
Survey of the symphonic music repertoire, including the symphony, the symphonic poem, and the concert overture, via discussion and analysis of selected works.

MUS 534 Proseminar in the Music of the Renaissance. Three hours.
An intensive study of the music, the composers, the diverse styles, genres, and techniques, the theoretical and aesthetic principles, and the performance practices associated with music of the Renaissance via reading, listening, and musical analysis.

MUS 535 Proseminar in the Music of the Baroque. Three hours.
An intensive study of the music, the composers, the diverse styles, genres, and techniques, the theoretical and aesthetic principles, and the performance practices associated with Baroque music via reading, listening, and musical analysis.

MUS 536 Proseminar in Opera History and Literature. Three hours.
Prerequisite: MUS 307 or equivalent.
Survey of operatic styles from the 17th to the 20th centuries via discussion and analysis of selected works.

MUS 537 Non-Serial 20th-Century Music. Three hours.
Prerequisite: Permission of the instructor. Detailed analysis of selected non-serial works of the 20th century. Offered fall semesters of odd-numbered years.

MUS 538 Serial Music. Three hours.
Prerequisite: Permission of the instructor.
Twelve-tone serial techniques and the analysis of serial and serial-informed compositions. Offered spring semesters of odd-numbered years.
MUS 539 Proseminar in Ethnomusicology. Three hours.
An introduction to the definition, theory, and methodology of ethnomusicology in the context of an examination of the music of selected world cultures.

MUS 540 Pedagogy of Theory. Three hours.
A study of teaching music theory to college undergraduates and the practical application of pedagogical principles in the classroom. Offered spring semesters of odd-numbered years.

MUS 541 The Teaching of Music History and Appreciation. Two hours.
Prerequisites: Two graduate proseminars and/or seminars in music history.
Designed to prepare students in the various music degree programs to teach music history and appreciation courses at the undergraduate level.

MUS 542 Advanced French Diction. Two hours.
Prerequisite: Graduate standing or permission of the instructor.
Advanced study of French diction for singers, including IPA and practical application. Offered on demand.

MUS 543 Advanced German Diction. Two hours.
Prerequisite: Graduate standing or permission of the instructor.
Advanced study of German diction for singers, including IPA and practical application. Offered on demand.

MUS 544 Advanced Italian Diction. Two hours.
Prerequisite: Graduate standing or permission of the instructor.
Advanced study of Italian diction for singers, including IPA and practical application. Offered on demand.

MUS 545 Graduate Vocal Pedagogy. Three hours.
Prerequisites: MUS 444 or equivalent; or permission of the instructor.
A detailed study of the historical and contemporary methods of pedagogy, and analysis of pedagogical problems.

MUS 549 Proseminar in the Music of the Medieval Period. Three hours.
An intensive study of the music, theoretical and aesthetic principles, and the culture of the Medieval period via reading, listening, musical analysis, and discussion.

MUS 550 Proseminar in the Music of the Classical Period. Three hours.
An intensive study of the music, the composers, the diverse styles and techniques, the theoretical and aesthetic principles, and the performance practices associated with music of the pre-classical and classical periods via reading, listening, and musical analysis.

MUS 552 Directed Studies in Piano Pedagogy. One to three hours.
Prerequisite: Admission to graduate study.
Independent research projects in piano pedagogy. Offered each semester.

MUS 553 Proseminar in the Music of the Romantic Period. Three hours.
An intensive study of the music, the composers, the diverse styles and techniques, the theoretical and aesthetic principles, and the performance practices associated with music of the 19th century via reading, listening, and musical analysis.

MUS 554 Proseminar in Jazz. Three hours.
Prerequisite: Permission of the instructor.
A study of jazz history and performance practices as applied to the performing musician and educator via transcription, analysis, and research. Offered spring semester.

MUS 556 Advanced Keyboard Harmony. Three hours.
Prerequisite: MUS 406.
An in-depth analysis and applied study of keyboard skills: harmonization, figured-bass, transposition, and open-score reading. Offered spring semesters of odd-numbered years.
MUS 558 Proseminar in the Music of the 20th Century. Three hours.
An intensive study of the music, the composers, the diverse styles and techniques, the theoretical and aesthetic principles, and the performance practices associated with music composed after 1900 via reading, listening, and musical analysis.

MUS 559 Special Topics in Musicology. Three hours.
Advanced study of a selected topic in musicology. Offered on demand.

MUS 561 History of the Wind Band and Traditional Literature to 1950. Three hours.
Comprehensive study of band history from the Renaissance to the present, together with a survey of early and traditional wind works of Mozart, Mendelssohn, Berlioz, Holst, Grainger, Poulenc, and others. Offered fall semesters, and during the first summer terms of even-numbered years.

MUS 562 Contemporary Wind Ensemble Literature. Three hours.
Detailed examination of wind ensemble literature since 1950, with emphasis on performance analysis and conducting techniques in the works of Schuller, Hindemith, Persichetti, Schwantner, Penderecki, Bassett, Krenek, and others. Offered spring semesters, and during the first summer terms of odd-numbered years.

MUS 563 Projects in Wind Music. Three hours.
Survey of rehearsal techniques and studies in wind performance practices and transcription. Offered fall and spring semesters and during the first summer term.

MUS 564 Wind Ensemble Practicum I. Two hours.
Students are required to participate as conducting assistants and, if assigned, as performers in an instrumental ensemble. Offered fall semester.

MUS 565 Wind Ensemble Practicum II. Two hours.
Continuation of Wind Ensemble Practicum I. Offered spring semester.

MUS 568 Seminar in Wind Literature: Chamber Forms. Two hours.
Prerequisite: Graduate standing.
An analytical survey of the content and performance practices of selected wind ensemble literature for chamber groups.

MUS 569 Seminar in Wind Literature: Large Forms. Three hours.
Prerequisite: Graduate standing.
An analytical survey of the content and performance practices of selected wind ensemble/band literature for large groups.

MUS 571 Choral Literature, 1450–1750. Two hours.
Prerequisites: Graduate standing and permission of the instructor.
In-depth survey of choral literature up to 1750. Offered spring semesters of odd-numbered years.

MUS 572 Choral Literature, 1750–Present. Two hours.
Prerequisites: Graduate standing and permission of the instructor.
In-depth survey of choral literature since 1750. Offered spring semesters of even-numbered years.

MUS 574 Graduate Vocal Literature I. Three hours.
Prerequisite: MUS 474 and MUS 475 or equivalent.
In-depth survey of the performance criteria and historical significance of solo vocal literature of the United States, British Isles, Germany, Austria, France, Italy, Spain, and Central/South American. Offered in Alternate years.

MUS 575 Graduate Vocal Literature II. Three hours.
Prerequisite: MUS 474 and MUS 475 or equivalent.
In-depth survey of the performance criteria and historical significance of solo vocal literature
of the United States, British Isles, Germany, Austria, France, Italy, Spain, and Central/South American. Offered in Alternate years.

**MUS 577 Advanced Organ Literature I.** Three hours.  
Prerequisite: Graduate standing or permission of the instructor.  
A survey of the literature of the organ from the 15th to the 18th centuries. Offered fall semesters of even-numbered years.

**MUS 578 Advanced Organ Literature II.** Three hours.  
Prerequisite: Graduate standing or permission of the instructor.  
A survey of the literature of the organ from the 18th century to the present. Offered spring semesters of odd-numbered years.

**MUS 581 Liturgy and the Arts and Worship Practices.** Two hours.  
Prerequisite: Permission of the instructor.  
A study of the relationship between liturgy, music, and other related arts, both in history and current practice.

**MUS 582 Hymnody.** Two hours.  
Prerequisite: Graduate standing and permission of the instructor.  
A study of the history and structure of hymn texts and music with special emphasis on the 20th and 21st centuries.

**MUS 583 Church Music Practicum.** One hour.  
Prerequisite: Graduate standing and permission of the instructor.  
A course intended to introduce basic materials and to review and develop service-playing skills and interpersonal skills needed by church musicians. Special emphasis given to the accommodation of choral works, the conducting of those works from the organ console, and improvisation.

**MUS 591 Readings in Music History.** Three hours.

**MUS 592 Advanced Choral Conducting.** Three hours.  
Prerequisites: Graduate standing and permission of the instructor.  
Representative literature from all periods is studied and conducted. Conducting techniques, rehearsal and vocal techniques, diction, performance practice, and score analysis are emphasized. Offered each semester. May be repeated for credit with varied repertoire.

**MUS 593 Advanced Orchestral Conducting.** Two hours.  
Both class and private sessions are held. This course is a continuation of Orchestral Conducting. More emphasis is placed on musical interpretation and technical improvements toward that end. Class meetings involve conducting piano transcriptions of major symphonic works, as well as videotaping sessions several times per semester. As part of the final examination, students conduct the University Symphony in a half-hour rehearsal/performance. Offered fall semester.

**MUS 594 Advanced Instrumental Conducting.** Three hours.  
Prerequisite: MUS 493.  
Baton technique, score reading, analysis, interpretation, rehearsal techniques, and instrumental problems in a few selected scores. Offered spring semester.

**MUS 595 Graduate Theory Review.** Three hours.  
Intensive review of freshman and sophomore music theory designed for graduate students who do not perform adequately on the Music Theory diagnostic examination at matriculation.

**MUS 596 Comprehensive Examination.** No hours.  
All master of music students are required to register for this course at the beginning of the semester during which they take the comprehensive examination. A grade will be determined entirely by an assessment of the student's performance on the comprehensive examination and will either be pass or fail. The course may be repeated once and must be passed if the student is to graduate.
MUS 597 Oral Examination. No hours.
All master of music students are required to register for this course at the beginning of the semester during which they take the oral examination. A grade will be determined entirely by an assessment of the student's performance on the oral examination and will either be pass or fail. The course may be repeated once and must be passed if the student is to graduate.

MUS 598 Research Not Related to Thesis. One to three hours.

MUS 599 Thesis Research. One to three hours.

MUS 608 Advanced Schenkerian Analysis. Three hours.
Prerequisite: MUS 518 or permission of the instructor.
Application of Schenkerian methodologies to large-scale tonal works. Offered spring semesters of even-numbered years.

MUS 609 Atonal Music. Three hours.
Prerequisite: Permission of the instructor.
Analysis of atonal compositions through a study of pitch and pitch class set structures. Offered fall semesters of even-numbered years.

MUS 611 Advanced Digital Synthesis Using C Sound. Three hours.
Prerequisite: MUS 512 or permission of the instructor.
Instrument design and compositional issues related to digital synthesis using C Sound. Offered spring semesters of odd-numbered years.

MUS 615 Special Topics in Musicology and Ethnomusicology. Three hours.
Prerequisite: Graduate standing or permission of the instructor.
Advanced study of a selected topic in musicology or ethnomusicology.

MUS 617 History of Music Theory. Three hours.
Prerequisite: Graduate standing or permission of the instructor.
Historical survey of theoretical systems in music from the ancient Greeks to the present. Offered according to demand.

MUS 619/MUS 620 Advanced Composition. Four hours each semester.
Prerequisite: Permission of the instructor.
Offered in summer school.

MUS 622 Seminar in Medieval and Renaissance Music. Three hours.
Prerequisites: Graduate standing and MUS 501.
An intensive study of a specific topic associated with Medieval and/or Renaissance music. Topic varies.

MUS 623 Seminar in Baroque Music. Three hours.
Prerequisites: Graduate standing and MUS 501.
An intensive study of a specific topic associated with Baroque music. Topic varies.

MUS 624 Seminar in Classical Music. Three hours.
Prerequisites: Graduate standing and MUS 501.
An intensive study of a specific topic associated with the music of the classical period. Topic varies.

MUS 625 Seminar in Romantic Music. Three hours.
Prerequisites: Graduate standing and MUS 501.

MUS 626 Seminar in 20th-Century Music. Three hours.
Prerequisites: Graduate standing and MUS 501.
An intensive study of a specific topic associated with music written in the 20th century. Topic varies.
**MUS 642 Advanced Vocal Pedagogy.** Three hours.
Prerequisite: Graduate standing or permission of the instructor.
An analytical survey of voice teaching with emphasis on practical application. Offered on demand.

**MUS 643 Brass/Woodwind/String Pedagogy.** One to three hours.
Intended to teach doctoral students how to be successful in applied studio teaching at the collegiate and preparatory level. The focus of the course will be specific relative to the student's major instrument. Offered each semester.

**MUS 650 Instrumental Conducting Pedagogy.** Three hours.
Prerequisite: Graduate standing.
A practical and theoretical study of conducting instruction.

**MUS 651 Choral Conducting Pedagogy.** Three hours.
Prerequisite: Graduate standing.
A practical and theoretical study of conducting instruction.

**MUS 652 Special Topics in Vocal Literature.** Three hours.
Prerequisite: MUS 474 and MUS 475 or equivalent.
in-depth survey of the performance criteria and historical significance of selected repertoire from the solo vocal literature.

**MUS 653 Special Topics in Vocal Literature.** Three hours.
Prerequisite: MUS 474 and MUS 475 or equivalent.
in-depth survey of the performance criteria and historical significance of selected repertoire from the solo vocal literature.

**MUS 671 Performance Seminar in Piano Literature.** Three hours.
Prerequisite: MM in piano or permission of the instructor.
A consideration of performance practice in important segments of piano literature. Offered according to demand.

**MUS 672 Performance Seminar in the Literature of Music for Piano and Orchestra.** Three hours.
Prerequisite: MM in piano or permission of the instructor.
A consideration of the musical, technical, and practical aspects of playing piano concertos. Offered according to demand.

**MUS 674 Topics in Choral Literature.** Two hours.
Prerequisites: Graduate standing and permission of the instructor.
A thorough analysis and historical study of the repertoire for the lecture recital. May be repeated for credit.

**MUS 675 Topics in Wind Literature.** Two hours.
Prerequisite: Graduate standing.
A thorough analysis and historical study of the repertoire for the recital.

**MUS 677 Topics in Organ Literature.** Three hours.
Prerequisites: Graduate standing and permission of the instructor.
In-depth study of the organ literature of a specific period, its content and performance practice related to the organs of the period, and the performance of the literature. Offered each semester. May be repeated for credit if literature varies.

**MUS 692 Advanced Choral Conducting.** Three hours.
Prerequisite: Graduate standing.
Advanced conducting techniques, score analysis and preparation, performance practice and interpretation, rehearsal, and vocal techniques and diction.

**MUS 694 Advanced Instrumental Conducting.** Three hours.
Prerequisite: Graduate standing.
Advanced baton technique, score reading, interpretation, rehearsal techniques, and instrumental problems in selected scores.

**MUS 696 Comprehensive Examination.** No hours.  
All doctor of musical arts students are required to register for this course at the beginning of the semester during which they take the comprehensive examination. A grade will be determined entirely by an assessment of the student's performance on the comprehensive examination and will either be pass or fail. The course may be repeated once and must be passed if the student is to graduate.

**MUS 697 Oral Examination.** No hours.  
All doctor of musical arts students are required to register for this course at the beginning of the semester during which they take the oral examination. A grade will be determined entirely by an assessment of the student's performance on the oral examination and will either be pass or fail. The course may be repeated once and must be passed if the student is to graduate.

**MUS 698 Research Not Related to Dissertation.** One to three hours.

**MUS 699 Document Research.** One to six hours.

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**Music, Applied (MUA)**

Studio instruction. The 500 level of applied study indicates graduate standing; the 600 level indicates doctoral standing. Master's students register for applied study at the 500 level, doctoral students at the 600 level. Each instrument carries its own numerical designation. The numbering pattern follows the order found in the current UA undergraduate catalog under course listings for music, applied.

**MUA 500 Level Studio Instrumental and Vocal Study.** One, two, or four hours (each semester). Prerequisites: Graduate standing and audition. Private instruction.

**MUA 501 Secondary Applied Study.** One hour. Prerequisites: Graduate standing and audition. Private instruction.

**MUA 600 Level Studio Instrumental and Vocal Study.** One, two, or four hours (each semester). Prerequisites: Doctoral standing and audition. Private instruction.

**Graduate Ensembles.** One hour (each semester). The ensembles listed below may be taken for graduate credit. MM performance majors are required to earn 2 semester hours of ensemble credit (1 hour in each of two different semesters) and, like all MM students may apply semester 2 hours (in addition to those required of them) as elective credits toward the degree. DMA students may apply a maximum of 4 semester hours as elective credit. All graduate ensemble credits are graded pass/fail.

**MUA 550 Symphony Orchestra**
**MUA 552 Wind Ensemble**
**MUA 558 Contemporary Music Ensemble**
**MUA 559 Jazz Ensemble**
**MUA 560 Opera Workshop**
**MUA 563 University Singers**
**MUA 569 Chamber Music**
The Department of Physics and Astronomy offers programs leading to the master of science and the doctor of philosophy degrees. Research toward a degree may be conducted in either experimental or theoretical areas.

Experimental programs include magnetic materials, high-energy physics, materials science, observational extragalactic astronomy, and particle astrophysics. Theoretical programs include condensed matter, elementary particles, atomic and molecular physics, extragalactic astronomy, astrophysics and particle astrophysics.

Admission Requirements
A student who wishes to take graduate work leading to the MS or PhD degree should have the equivalent of an undergraduate major in physics, and mathematics through differential equations. Any undergraduate courses required to complete a student's preparation should be taken as soon as possible. A comprehensive background in general physics is considered as important as mastery of a specialized field. To be considered for regular admission, the GRE general test or the GRE subject test in Physics should have a score at the 50th percentile.

General requirements are stated in the Admission Criteria section of this catalog. Specific requirements in physics follow. Note that requirements for students specializing in astronomy differ from those for students in other physics areas.

Requirements for the MS Degree

Plan I (with thesis). A total of 24 hours of coursework is required, 18 of which must be in physics and astronomy. Physics students must take PH 501, PH 531, PH 532, PH 541, PH 542, and 6 hours of PH 599. Students specializing in astronomy must take PH 501, PH 531, PH 541, 6 hours of PH 599, and three graduate astronomy courses other than AY 650. All full-time students must take one hour of seminar (PH 597 or AY 597) appropriate to their area of specialization each semester. PH 597 and AY 597 do not count toward the 24-hour course requirement. An oral examination covering coursework and the thesis is required for completion of the degree.

Plan II (without thesis). A total of 30 hours of coursework is required, 24 of which must be in physics and astronomy. Physics students must take PH 501, PH 531, PH 532, PH 541, PH 542, and two of the following: PH 551, PH 561, PH 571, and PH 581. Students specializing in astronomy must take PH 501, PH 531, PH 532, PH 541, and PH 542, and three graduate astronomy courses other than AY 650. All full-time students must take one hour of seminar (PH 597 or AY 597) appropriate to their area of specialization each semester. PH 597 and AY 597 do not count toward the 30-hour course requirement. An oral examination covering coursework is required for completion of the degree.

Requirements for the PhD Degree

The student's PhD Plan of Study must be approved by the department and the Graduate School by the time the student completes 30 graduate semester hours of UA and/or transfer course work.

Courses. A total of 48 hours of coursework is required, 36 of which must be in physics and astronomy. All students are required to take PH 501, PH 531, PH 532, PH 541, PH 542, and PH 571. An additional 18 hours of required graduate work will be determined by the student's
advisor in consultation with the student. For students specializing in astronomy, 15 of those 18 hours must include astronomy courses with at least one course at the 600 level. All full-time students must take one hour of seminar (PH 597 or AY 597) appropriate to their area of specialization each semester. Of the 48-hour requirement, a maximum of 6 hours may be a combination of PH 597 (or AY 597), PH 598, and PH 698.

**Examinations.** There are two separate examinations each prospective PhD candidate must pass: the qualifying exam and the preliminary exam. The qualifying exam consists of a written exam on advanced undergraduate physics. Financial support may be withdrawn if a student does not pass the exam by the end of his or her second year at the University. Passing the qualifying exam is a requirement for acceptance into the PhD program.

The preliminary exam is an oral exam on the student's research plan and on courses in the student's area of specialization. Passing the preliminary exam is a requirement for admission to candidacy for the PhD and allows the student to commence dissertation research. More detailed information regarding physics PhD examination policies is available in the office of the Department of Physics and Astronomy. **Time Limit.** All requirements must be completed in the seven years (21 fall, spring and summer semesters) following admission to the program. More detailed information is in the [Degree Requirements](http://graduate.ua.edu/catalog/16700.html) section of this catalog.

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**Course Descriptions**

*Graduate credit will not be granted to physics students for 400-level physics or astronomy courses. Graduate students enrolled in 500-level courses that are also offered at the 400 level are expected to perform extra work of an appropriate nature.*

**Physics (PH)**

**PH 501 Classical Dynamics.** Three hours. 
Prerequisite: PH 301. 
Variational principles and Lagrange's equations; two-body central-force problems; kinematics of rigid-body motion; rigid-body equations of motion; special relativity; Hamilton's equations of motion; and canonical transformations.

**PH 505 Physics for Science Teachers.** Three hours. 
Prerequisite: Permission of the instructor.
Selected topics in contemporary physics for high school and post-secondary science teachers.

**PH 511 Biophysics.** Three hours.
Physics of biological systems: proteins, lipids, nucleic acids, supramolecular structures, and molecular motors; structure, function, energetics, thermodynamics, bionanotechnology. Emphasis on systems that are best understood in physical and molecular detail.

**PH 523 Relativity.** Three hours.
Special relativity, equivalence principle, tensor analysis, gravitational effects, curvature, Einstein's field equations, action principle, classic tests of Einstein's theory.

**PH 531 Electromagnetic Theory.** Three hours.
Prerequisite: PH 332.
Electric and magnetic fields, Green's functions, and Maxwell's equations.

**PH 532 Electromagnetic Theory.** Three hours.
Prerequisite: PH 531.
Electromagnetic waves, relativity, and selected topics.

**PH 534 Digital Electronics and Computer Interfacing.** Three hours. Two three-hour laboratories.
Prerequisite: PH 334 or permission of the instructor.
Theory and practical application of digital integrated circuits, including gates, flip flops, counters, latches, and displays. Computer data acquisition and control using LabView, A/D
and D/A fundamentals. Digital communications.

**PH 541 Quantum Mechanics.** Three hours.
Prerequisite: PH 442.
Solution of the Schroedinger equation, matrix methods, angular momentum, and approximation methods.

**PH 542 Quantum Mechanics.** Three hours.
Prerequisite: PH 541.
Time-dependent perturbation theory, scattering theory, radiation, identical particles, and spin.

**PH 551 Atomic and Molecular Physics.** Three hours.
Prerequisite: PH 441.
A detailed study of the structure of simple atomic and molecular systems, perturbation theory, the hydrogen and helium atoms, the hydrogen molecular ion, the hydrogen molecule, and introduction to mathematical methods of molecular physics.

**PH 561 Nuclear and Elementary Particle Physics.** Three hours.
Prerequisite: PH 441.
Structure and properties of nuclear and subnuclear matter; conservation laws; scattering and decay processes; and fundamental interactions.

**PH 571 Statistical Physics.** Three hours.
Prerequisites: PH 441 and PH 471.
Ensembles, partition function, quantum statistics, Bose and Fermi systems, phase transitions and critical phenomena, and applications.

**PH 581 Solid-State Physics.** Three hours.
Prerequisite: PH 441.
Structure of simple crystals; thermal, electrical, and magnetic properties of solids; the free-electron model and the band approximation; and semiconductors.

**PH 582 Selected Topics in Physics and Astronomy.** One to three hours.
Prerequisite: Permission of the instructor.
May deal with any physics or astronomy topic not covered by existing courses. The course title is added at the time the course is taught. Repeat credit is allowed for different course titles.

**PH 583 Magnetic Resonance.** Three hours.
Prerequisite: Permission of the instructor.
Classical and quantum mechanical descriptions of nuclear magnetic resonance and electron spin resonance; experimental techniques; and applications to physical, chemical, and biological problems. Offered according to demand.

**PH 585 Physical Principles of Magnetism.** Three hours.
Prerequisite: Permission of the instructor.
Phenomenological properties of magnetic materials including anisotropies, magnetostriction, domain walls, coercivity, reversal mechanisms, superparamagnetism, and dynamics.

**PH 586 Magnetic Materials and Devices.** Three hours.
Prerequisite: Permission of the instructor.
The relationships between the properties of magnetic materials and their applications; an understanding of the wide range of properties in paramagnetic, ferromagnetic, ferrimagnetic, and antiferromagnetic materials is developed and discussed in relation to a variety of devices from transformers to spin valve heads.

**PH 587 The Physics and Materials of Magnetic Recording.** Three hours.
Prerequisite: Permission of the instructor.
Principles of magnetic recording, write and read processes, particulate and thin film recording media, write and read heads, including magnetoresistive (AMR and GMR) heads. Emphasis will be placed on the key technologies critical to high-density recording.
**PH 591 Advanced Laboratory.** Three hours. Two three-hour laboratories weekly. 
Prerequisite: Permission of the instructor. 
Experimental work in modern physics at an advanced level.

**PH 597 Physics Seminar.** One hour. 
Prerequisite: Admission into physics graduate program. 
Required of all full-time physics graduate students each semester in residence. (Students specializing in astronomy must take AY 597.) Students are required to attend at least 10 department colloquia and/or specialty research seminars. Students in their second year and beyond are required to give one oral research presentation.

**PH 598 Nonthesis Research.** Variable credit.

**PH 599 Thesis Research.** Variable credit.

**PH 641 Relativistic Quantum Mechanics.** Three hours. 
Prerequisite: PH 542. 
The Dirac equation, Lorentz covariance, free-particle solutions of the Dirac equation, Foldy-Wouthuysen transformation, propagator theory, and applications to quantum electrodynamics.

**PH 642 Quantum Field Theory.** Three hours. 
Prerequisite: PH 641. 
Classical field theory, quantization of free fields, interacting fields, the scattering matrix, Feynman rules and diagrams, evaluation of integrals and divergences, and electroweak and strong interactions. Offered according to demand.

**PH 651 Advanced Atomic and Molecular Physics.** Three hours. 
Prerequisite: PH 551. 
Special topics course in atomic and molecular physics for advanced graduate students. Detailed coverage of topics that are arranged with the instructor. Offered according to demand.

**PH 661 High-Energy Physics.** Three hours. 
Prerequisite: PH 642. 
Gauge invariance, non-Abelian gauge theories, hidden symmetries, electroweak interactions of leptons and quarks, strong interactions among quarks, string theories, and phenomenology of high-energy interactions. Offered according to demand.

**PH 681 Advanced Solid-State Physics.** Three hours. 
Prerequisite: PH 581. 
Computational methods in solid-state physics are explored in more detail than in PH 581. Band structure calculations, Green's functions, density-functional methods, superconductivity, and disordered materials. Offered according to demand.

**PH 682 Selected Topics in Physics.** One to three hours. 
Prerequisite: Permission of the instructor. 
May deal with any physics topic not covered by existing courses. The course title is added at the time each course is taught. Repeat credit is allowed for different course titles.

**PH 698 Nondissertation Research.** Variable credit.

**PH 699 Dissertation Research.** Variable credit. Three-hour minimum.

**Astronomy (AY)*

*All courses are offered according to demand.
AY 501 Celestial Mechanics and Astrodynamics. Three hours.
Prerequisite: PH 301.
Dynamics of space probes; solar system objects; stars and clusters; and galaxies and galaxy clusters.

AY 521 Theoretical Astrophysics. Three hours.
Prerequisite: PH 332.
Introduction to astrophysical processes in stars and the interstellar medium.

AY 533 Observational Techniques. Three hours.
Prerequisite: PH 333.
Theoretical and practical aspects of modern astronomical observational techniques.
Photometry, spectroscopy, interferometry, and optical and radio data reduction and image processing.

AY 550 Stars and Stellar Evolution. Three hours.
Prerequisite: PH 442.
Photospheric structure, radiative processes, spectral lines, and interpretation of stellar spectra; and internal structure, evolution, nucleosynthesis, and the Hertzsprung-Russell diagram.

AY 570 Galaxy and Interstellar Medium. Three hours.
Prerequisite: PH 441.
Dynamics and evolution, stellar populations, star formation, physical processes in the interstellar medium, and spectral lines.

AY 597 Astrophysics Seminar. One hour.
Prerequisite: Admission into physics graduate program.
Required of all full-time physics graduate students specializing in astronomy each semester in residence. Students must attend weekly seminars and make one oral presentation.

AY 620 Extragalactic Astronomy. Three hours.
Prerequisite: PH 441.
Galaxies, clusters, active galaxies, quasars, distance scale, and physical processes.

AY 640 Radiation Processes in Astrophysics. Three hours.
Prerequisite: AY 521 or equivalent.
Radiation processes of importance in high-energy radio, UV-optical-IR astronomy. Emphasis is on continuum processes.

AY 650 Special Topics in Astronomy and Astrophysics. One to three hours.
Prerequisite: Permission of the instructor.
May deal with any topic in astronomy or astrophysics not covered by existing courses. The course title is added at the time each course is taught. Repeat credit is allowed for different course titles.

AY 660 Astrophysical Plasmas and Magnetodynamics. Three hours.
Prerequisites: PH 301 and PH 332.
Includes particle orbit theory, hydromagnetics, shock waves in plasmas, waves in plasmas, and macroscopic and microscopic stability of astrophysical plasmas.
6.18 DEPARTMENT OF POLITICAL SCIENCE (PSC)

Chairperson: Professor Richard Fording, Office: 309 ten Hoor Hall

The department offers programs leading to the master of arts (MA), master of public administration (MPA), and doctor of philosophy (PhD) degrees. Much more detailed information relating to the degrees offered by the Department of Political Science is contained in the Graduate Handbook at the web site of the Political Science Department. Students and prospective students should consult as well as this catalog.

Master of Arts

Admission Requirements
Applicants for admission to the MA program must submit scores from the Graduate Record Examination general test. Additional information is in the Admission Criteria section of this catalog.

Degree Requirements

Plans I and II. MA students may follow either Plan I, requiring 30 semester hours of coursework, a written comprehensive examination, a thesis, and an oral examination in defense of the thesis; or Plan II, requiring 36 hours of coursework and a written comprehensive examination.

Course requirements. Under either plan, students must take courses in three of five fields, including a core seminar in each. The available fields are American politics, comparative politics, international relations, public policy and administration, and political theory. Students select one major field and two minor fields. Plan I students take 9 hours in the major field and 6 in each of two minor fields; Plan II students take 12 hours in the major field and 6 in each of two minor fields. The core seminars are PSC 610 Core Seminar in American Politics, PSC 631 Seminar in Comparative Politics, PSC 642 Concepts and Theories of International Relations, PSC 651 Political Theory Seminar, and PSC 565 Survey of Public Administration. All students must complete PSC 521 Research Design and PSC 522 Quantitative Methods in Political Science I (or approved substitutes).

Comprehensive examination. The written comprehensive examination will cover the student's major field and will require integration of material across courses.

After passing the written examination, a student following Plan I should prepare a thesis prospectus, which should describe the substance and methods of the thesis research, outline the thesis itself, and provide a preliminary bibliography. Once the prospectus has been approved, the chairperson will formally appoint a committee of three faculty members to supervise the thesis. The student must take a final oral examination to defend the thesis and show competence in the field in which it lies. Except in unusual circumstances, the final oral examination must be taken during the fall or spring semester and before final course examinations begin. After the examination, the student must submit the thesis electronically in accordance with procedures laid out in this Catalog.

Detailed information on requirements is in the Degree Requirements section of this catalog.

Master of Public Administration

Admission Requirements
The MPA is a professional degree program designed primarily for those who plan a career in federal, state, or local government. Applicants for admission to the MPA program must submit scores from the Graduate Record Examination general test. Scores from the Miller Analogies Test may be submitted as supplementary information, but not as a substitute for the GRE.
Additional information is in the "Academic Policies" section of this catalog.

**Degree Requirements**

Plans I and II. MPA students may follow either Plan I, requiring 30 hours of coursework, a written comprehensive examination, a thesis, and an oral examination in defense of the thesis; or Plan II, requiring 36 hours of coursework and a written comprehensive examination. Students following Plan II may receive up to 6 hours of credit for an internship, and students following Plan I may receive up to 3 hours.

**Course requirements.** MPA students must complete at least three of the following four courses: PSC 565 Survey of Public Administration, PSC 662 Organization Theory, PSC 667 Public Budgeting, and PSC 562 Public Personnel Administration. Including the preceding, at least 18 hours must be taken from the courses listed under "Public Policy and Administration." Student must also complete PSC 522 Quantitative Methods in Political Science I.

Detailed information on requirements is in the **Degree Requirements** section of this catalog.

**Doctor of Philosophy**

**Admission Requirements**

Admission to the PhD program requires either a bachelor's or a master's degree. Applicants must submit scores from the Graduate Record Examination general test.

**Degree Requirements**

Major and minor fields. PhD students must choose and develop competence in one major field, a secondary field, and a third field (see fields listed above under MA Course Requirements). In exceptional cases, a student may choose their third field outside the department, with special permission from the graduate studies committee.

The **PhD Plan of Study** is available at the Graduate School website. All doctoral students must have a completed Plan of Study approved by the Graduate School no later than the semester during which the student will complete 30 semester hours of UA and/or transfer credit for the doctoral degree. Otherwise, a “hold” may be placed on future registrations.

**Course requirements.** The student's plan of study for the PhD degree must be approved by the department and the Graduate School by the time the student completes 30 graduate semester hours of UA and/or transfer coursework. PhD students must complete at least 51 hours of graduate coursework. At least 18 hours must be taken within the student's major field, at least 12 hours must be taken within the secondary field, and at least 9 hours must be taken in the third field. Up to 24 hours may be transferred from other institutions, with the permission of the graduate studies committee and with some limits on the number of courses per field that can be transferred. Students must take the core seminars in their fields (see the list under "MA Course Requirements" above). In addition, all students must complete 9 hours of methods courses, including PSC 521 Research Design, PSC 522 Quantitative Methods in Political Science I, and PSC 621 Quantitative Methods in Political Science II.

Students interested in pursuing a topic in greater depth than the standard course offerings allow may take up to 12 hours of PSC 595 Directed Reading and PSC 598 Individual Research, with up to 6 hours in the major field and three hours in each of the secondary and third fields.

**Language requirement.** A foreign language is required of PhD students if appropriate to the student's research interests. The appropriateness of the foreign language requirement shall be determined by the relevant faculty in the student's primary field of interest prior to the student's completion of 18 hours in residence in the PhD program. Students may, with approval of the Graduate Studies Committee, substitute foreign language for the PSC 621 requirement.

**Comprehensive examination.** Before writing a dissertation, but only after completing at
least two full years of graduate study and completing all course requirements, PhD students must take and pass written comprehensive examinations in their major and secondary fields. Students whose written results are weak but fall short of failing will be required to pass an oral exam. Exams will be given during fall and spring semesters only.

**Candidacy.** Students who have fulfilled the course requirements and passed the comprehensive examination become PhD candidates after the Graduate School approves the student’s formal application to candidacy for the doctoral degree.

**Dissertation.** Students must complete no less than 24 hours of dissertation credit (699). As soon as possible after satisfying the requirements for candidacy, each student should submit three copies of a dissertation prospectus to the department chairperson, who will establish a dissertation committee of five faculty members, with at least three from the Department of Political Science and at least one from another department. The prospectus should contain the same information as an MA thesis prospectus (see above).

The department chairperson will decide whether to approve the prospectus, on the recommendation of the dissertation committee. Once the prospectus has been approved, the student may begin work on the dissertation itself, under the supervision of his or her dissertation committee. When finished, the student must take a final oral examination to defend the dissertation and demonstrate competence in the field in which it lies. The examination, conducted by the dissertation committee, must ordinarily be held during the fall or spring semester. Following a successful defense, the student must submit the thesis electronically in accordance with procedures laid out in this Catalog.

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**Course Descriptions**

*Prerequisite: Graduate standing.*

**American Politics**

**PSC 511 Public Opinion.** Three hours.
The formation, distribution, structure, properties, and techniques of measuring public opinions in the United States.

**PSC 512 Urban and Metropolitan Government.** Three hours.
An examination of the implications of urban growth, the organization of urban and metropolitan areas, and the political forces operating at this level.

**PSC 566 Urban Policy.** Three hours.
An examination of urban political structure and its influence upon selected areas of public policy in contemporary urban society.

**PSC 611 American Political Behavior.** Three hours.
Research and methodology in the areas of social and psychological factors related to voting, party preference, and ideology.

**PSC 612 Judicial Politics.** Three hours.
Examines the role of the courts in political systems with primary emphasis on the United States Supreme Court.

**PSC 614 State Politics.** Three hours.
An investigation of electoral, executive, legislative, bureaucratic, and judicial politics in American states.

**PSC 615 American National Government Executive and Legislative Institutions.** Three hours.
An examination of the structure, operation, and politics of national government executive and legislative institutions.

**PSC 616 Topics in American Politics.** Three hours.
An examination of selected problems in American politics. Content varies.

**Comparative Political Systems**

**PSC 531 Political Development.** Three hours.  
An examination of the political processes in the developing world, especially of the stress of change and impact of economic development on political life.

**PSC 533 Communism, Europe 1945–89.** Three hours.  
The interaction of Marxist theory and practice in various national settings, with attention to the differential evolution of Communist regimes and parties.

**PSC 543 Comparative Public Policy.** Three hours.  
An examination of the actors and processes involved in making public policy, with an emphasis on the question of what kinds of governments are responsive to popular demands.

**PSC 631 Seminar in Comparative Politics.** Three hours.  
A survey of the theoretical literature in the field of comparative politics.

**PSC 632 Topics in Comparative Politics.** Three hours.  
An examination of selected problems in comparative politics.

**PSC 633 Soviet and Post-Soviet Politics.** Three hours.  
An examination of highly developed modern authoritarianism in the Soviet Union, dynamics of systemic evolution and failure, as well as patterns and sources of democratization and nondemocratic politics in Russia and the newly independent states.

**PSC 634 Politics of Advanced Industrialized Democracies.** Three hours.  
An examination of the government and politics of the advanced industrialized democracies, including Western Europe, Japan, Canada, Australia, and New Zealand. Precise content varies.

**PSC 635 Politics of the European Union.** Three hours.  
A survey of the literature on European integration. Theories of integration, including neofunctionalism and intergovernmentalism, will be examined. Topics will include EU institutions, political parties and the EU, democracy within the EU, and EU policies.

**PSC 637 Postcommunism.** Three hours.  
Examination of the processes of transition from communist political systems in comparative perspective. Attention to democratization and the revival of authoritarianism in East Central Europe and Eurasia.

**International Relations**

**PSC 513 American Foreign Policy.** Three hours.  
An examination of the forces and processes affecting United States' foreign relations. Attention is also given to the content and problems of contemporary American foreign policy.

**PSC 514 American Defense Policy.** Three hours.  
An investigation of the processes involved in making American defense and security policy and the substance of that policy.

**PSC 542 International Conflict.** Three hours. An examination of the various kinds of violent conflict in which nation-states become involved.

**PSC 544 International Organization.** Three hours.  
This course details the essential structures, actors, and processes in international organizations, by examining both governmental and non-governmental organizations and their roles in the areas of global security, economy, and social welfare.

http://graduate.ua.edu/catalog/16800.html
PSC 641 Issues in International Relations. Three hours.
An examination of major problem areas in the international system and their effects. Content varies.

PSC 642 Concepts and Theories of International Relations. Three hours.
A survey of contemporary theoretical approaches to the study of international relations, providing an overview of traditional and behavioral orientations.

PSC 643 International Political Economy. Three hours.
This course considers mercantilist, liberal, and socialist theories of political economy. Topics include international trade and the monetary system, the consequences of interdependence for interstate conflict, the operation of multinational corporations, and economic development.

PSC 644 Interstate Conflict. Three hours.
This is an examination of the causes of interstate war and the conditions that promote peace and security. Realist and liberal theories of war are contrasted. Historical and formal analyses are considered, but emphasis is on the use of quantitative methods of analysis.

Methodology

PSC 521 Research Design. Three hours.
Includes but is not limited to the role of theory, development of hypotheses, modes of observation and analysis, and testing of hypotheses.

PSC 522 Quantitative Methods in Political Science I. Three hours.
Introduction to statistical techniques, including univariate and bivariate descriptive statistics and their application within the field of political science.

PSC 523 Survey Research Methods. Three hours.
Examination of the theory and practice of various types of surveys and different parts of the survey research process (e.g., sampling, questionnaire design, interviewing, and data reduction).

PSC 621 Quantitative Methods in Political Science II. Three hours.
Prerequisites: PSC 521 and PSC 522, or equivalents.
Data analysis and statistical applications in political research, including data processing, inferential statistics, correlation and regression, multivariate analysis, and other multidimensional techniques.

PSC 622 Seminar in Political Science Methodology. Three hours.
May be repeated for up to 6 hours of credit. Topics vary and may range from case studies and historical analysis to mathematical modeling and computer simulation.

Political Theory

PSC 552 American Political Thought. Three hours.
Investigates the origin and direction of the U.S. political ideology, including liberalism, civic republicanism, and debates condemning American exceptionalism.

PSC 650 Ancient Political Thought. Three hours.
A consideration of classic thinkers including Thucydides, the Presocratics, Plato, Aristotle, and Augustine. Attention will also be given to how more recent theorists have dealt with the ancients.

PSC 651 Modern Political Thought. Three hours.
An examination of key political theorists from the 16th to the 19th centuries. Assigned works may vary but typically include those by Machiavelli, Hobbes, Locke, Rousseau, J. S. Mill, Marx, and Nietzsche.
PSC 653 Topics in Political Theory. Three hours. An examination of selected political theorists. Content varies.

PSC 654 Twentieth-Century Political Thought: Political Judgment. Three hours. This course asks what political judgment is and whether or not we have lost our capacity for it. Readings include the works of Arendt, Marcuse, Oakeshott, and Nietzsche.

Public Policy and Administration

PSC 561 Administrative Regulation. Three hours. The impact of legal powers and procedures of administrative agencies on public policy. Analysis of regulatory powers in American governments.

PSC 562 Public Personnel Administration. Three hours. A study of the American public personnel system, with an emphasis on the political setting of government employment, equal opportunity and affirmative action, and collective bargaining.

PSC 565 Survey of Public Administration. Three hours. Introduction to the scope, theory, and substantive issues of public administration.

PSC 613 Intergovernmental Relations. Three hours. A study of intergovernmental relationships in selected policy areas, with attention given to grant-in-aid programs and other devices of cooperative federalism.

PSC 661 The Environment of Public Administration. Three hours. An analysis of the physical, technological, legal, and political environments of administration.

PSC 662 Organization Theory. Three hours. An analysis of the theories of organization and management that examines models, reviews current administrative philosophy, and presents contemporary trends in organization and management.

PSC 663 Selected Problems in Public Administration. Three hours. May be repeated up to a maximum of 6 hours of credit. In-depth analysis of a policy issue or administrative problem. Specific topics vary.

PSC 664 Problems of Public Policy. Three hours. Focuses on issue and policy analysis, with attention to formal and informal processes of policy development and program implementation.

PSC 665 Urban Administration. Three hours. An examination of major urban problems and the administrative approach to solving these problems.

PSC 666 Political Economy and Public Policy. Three hours. An examination of the political economy/public choice approach to the study of public policy.

PSC 667 Public Budgeting. Three hours. Problems of financial management in governmental units: revenue sources, budgeting, financial management, and control.

Miscellaneous

PSC 500 Department Seminar I. Five hours. Once-monthly information sessions required of new political science graduate students.

PSC 501 Department Seminar II. Five hours. A continuation of PSC 500.
**PSC 595 Directed Reading.** One to three hours.

**PSC 598 Individual Research.** One to three hours.

**PSC 599 Thesis Research.** Variable credit.

**PSC 679 Internship and Supervised Research.** Three to six hours. Field work and research opportunities to be supervised by departmental faculty.

**PSC 699 Dissertation Research.** Variable credit. Three-hour minimum.
The department offers programs leading to the doctor of philosophy (PhD) degree in clinical psychology and in experimental psychology. The clinical psychology program is accredited by the American Psychological Association. Concentrations in clinical psychology include child clinical, health psychology, geropsychology, and psychology/law. Concentrations in experimental psychology include cognitive, social, and developmental science. The developmental science concentration is in collaboration with the Department of Human Development and Family Studies.

Areas of current faculty research interest include aging, child and adolescent behavior and peer relationships, youth violence, forensic psychology, behavioral intervention, memory, chronic pain, depression, public health psychology, cultural diversity, health disparities, sleep, neuropsychology, visual-spatial cognition, emotion, autism, persuasion, unconscious cognition, risk assessment, personality, reading processes, social cognition, health attitudes, dehumanization, perception, cognitive aging, cognitive neuroscience, intellectual abilities, media psychology, and creativity.

The department operates a fully staffed psychology clinic offering psychological assessment and intervention services to University students, children, and adults. These facilities are also used in the training of clinical graduate students as professional psychologists. Each candidate for the PhD degree in clinical psychology takes practicum courses in the psychological clinic and must also complete a one-year internship in an accredited facility. The internship is taken after completion of coursework and passing of the doctoral preliminary exam and is a degree requirement.

Admission Requirements

Students applying for graduate work in psychology must present at a minimum undergraduate courses in general psychology, statistics, and experimental psychology (or research methods). In addition, it is desirable for students to have prior coursework in a laboratory science (particularly biology), college mathematics, and in the area of a their intended concentration.

Applications for admission to graduate study must be accompanied by Graduate Record Examination (GRE) general test scores (the advanced section is recommended for clinical applicants). Admission is competitive and is influenced by the overall quality of the applicant's record, including grades, GRE scores, letters of recommendation, past experience, and match between the students and faculty interests. The application deadline is December 1 for the clinical psychology program and December 15 for the experimental psychology program. Complete applications must be received by these deadlines to ensure full consideration for admission for the following term.

Additional information is in the Admission Criteria section of this catalog.

Degree Requirements

Students earn the MA degree en route to the PhD, and they are required to follow Plan I. The MA degree is awarded after twenty-four credit hours of coursework, six credit hours of thesis, and an approved completed thesis. The 24 hours of coursework may vary by concentration, but must include the following:

- PY 602 Advanced Statistics I
- PY 607 Research Methods in Psychology
The student's **PhD Plan of Study** must be approved by the department and the Graduate School by the time the student completes 30 graduate semester hours of UA and/or transfer course work; otherwise, a "hold" may be placed on future registration. The minimum number of credit hours required for the PhD in psychology varies by concentration. All graduate students complete the General Psychology Core, the Research Skills Core, a master's thesis and a doctoral dissertation. In addition, clinical students complete the Clinical Core and a year-long clinical internship. Students in each of the clinical and experimental concentrations also complete advanced coursework in their concentration. More detailed information is available at the [Department of Psychology](http://graduate.ua.edu/catalog/16900.html) website.

Additional information is in the [Degree Requirements](http://graduate.ua.edu/catalog/16900.html) section of this catalog.

### General Psychology Core:

- PY 650 Cognition and Learning
- PY 651 Physiological Psychology or PY 629 Cognitive Neuroscience
- Two of: PY 670 Perception, PY 652 Life-Span Developmental Psychology, PY 672 Advanced Social Psychology (some concentrations require a specific course from this set)
- PY 471 History and Systems if not taken as an undergraduate

### Research Skills Core:

- PY 607 Research Methods in Psychology
- PY 602 Advanced Statistics I
- PY 603 Advanced Statistics II
- One of: PY 604 Multivariate Methods of Analysis, PY 659/BER 558 Psychometrics, BER 646 Structural Equations Modeling, or approved alternative

### Advanced Coursework as applicable (see details at the Psychology website):

- Clinical Core (required for clinical only)
- PY 695 Teaching of Psychology (required for Experimental, optional for clinical)
- Advanced Coursework in Student's Concentration

### Thesis and Dissertation Hours:

- PY 599 Thesis research (6 hours)
- PY 699 Dissertation research (24 hours)

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**Graduate Minor.** Doctoral students in other departments may complete a graduate minor in psychology. A graduate minor in psychology shall consist of 12 graduate hours, at least 6 of which are to be selected from among PY 650 Cognition and Learning; PY 670 Perception; PY 672 Advanced Social Psychology; PY 652 Life-Span Developmental Psychology; and PY 651 Physiological Psychology or PY 629 Cognitive Neuroscience. Other courses available to minors and offered on a regular basis are PY 693 Advanced Seminar in General Psychology, PY 591 Senior Seminar in Psychology, and statistics courses PY 602, PY 603, PY 604, PY 659. Occasionally other courses will be offered that will count towards the minor. All courses require the permission of the director of graduate studies and the course instructor. Many courses have specific prerequisites.

Students seeking a minor in psychology must be in good standing and at the second year or beyond in residency in a University of Alabama doctoral program. Students must achieve a 3.00 GPA in the minor, with only one grade of "C." No grade below "C" will count toward the minor. No more than 6 hours may be transferred from a department of psychology in another institution. The director of graduate studies shall determine who is accepted for a minor program of study and shall determine the appropriate courses to be taken in a timely manner.
In addition, the director shall certify a completed minor to the Graduate School and to the home department.

Course Descriptions
General prerequisites: Graduate standing and permission of both the director of graduate studies and the instructor. Graduate students enrolled in 500-level courses that are also offered at the 400 level are expected to perform extra work of an appropriate nature.

PY502 Introduction to Data Analysis. Three hours.
Course focuses on training the skills that are most useful to data analysts, including data management, the use of statistical software to conduct analyses, and the interpretation and presentation of statistical results.

PY503 Advanced Data Analysis. Three hours.
Prerequisite: PY502.
Provides students with the ability to conduct and interpret more advanced statistical analyses. The focus is on the General Linear Model, but also includes other analyses such as logistic regression and factor analysis.

PY 581 Readings in Psychology. One to three hours.
Prerequisite: Permission and sponsorship of an instructor.
Selected supervised readings.

PY 591 Seminar in Psychology. One to three hours.
In-depth examination of a selected contemporary psychological area. Different sections offered each semester. Section descriptions are available at registration.

PY 598 Graduate Research. One to three hours.
Prerequisite: Permission and sponsorship of an instructor.
Research conducted in apprenticeship to a graduate faculty member.

PY 599 Thesis Research. Variable credit.

PY 602 Advanced Statistics I. Three hours.
An applied course explaining how to use categorical predictor variables to explain continuous response variables. Covers t-tests, ANOVA, and nonparametric alternatives in between-, within-, and mixed-model designs.

PY 603 Advanced Statistics II. Three hours.
Prerequisite: PY 602.
An applied course explaining how to use continuous predictor variables to explain continuous response variables. Covers correlation, regression, and general linear models including both categorical and continuous predictor variables.

PY 604 Multivariate Methods of Analysis. Three hours.
Prerequisites: PY 602 and PY 603.
Multivariate analysis, with emphasis on MANOVA, discriminant analysis, canonical correlation, and the multivariate approach to repeated measures analyses.

PY 607 Research Methods in Psychology. Three hours.
Study and analysis of psychological methodology.

PY 608 Introduction to Ethics. Three hours.
Prerequisite: First- or second-year graduate student in psychology.
Introduction to ethical issues as they affect the practice of psychology.

PY 609 Psychological Assessment I. Three hours.
Principles of psychological evaluation; introduction to the clinical use of assessment techniques, with particular emphasis on intellectual assessment.

http://graduate.ua.edu/catalog/16900.html
PY 610 Psychological Assessment II. Three hours.
The theory and application of projective techniques and personality inventories for adults.

PY 611 Introduction to Neuropsychological Assessment. Three hours.
An introduction to the theory, content, and practice of clinical neuropsychology.

PY 612 Psychological Assessment III. Three hours.
Principles of psychological evaluation, with particular emphasis on the assessment of children.

PY 614 Categorical Data Analysis. Three hours.
The use of statistical analysis tools for analyzing binary and categorical data.

PY 619 Principles of Psychotherapy. Three hours.
The study of psychotherapeutic processes, outcomes, and systems, with particular attention
given to the operations common to all approaches.

PY 620 Behavior Therapy. Three hours.
Provides a framework for conceptualizing, assessing, and treating child and adult clinical
problems from the perspective of behavioral psychology.

PY 621 Psychotherapy Laboratory. One hour.
A skills-building seminar emphasizing interview and communications techniques. Introduction
to practicum.

PY 625 Contemporary Issues in Cognitive Research. One to three hours.
Current issues relating to research in cognitive and individual differences are presented and
discussed.

PY 627 Developmental Disabilities. Three hours.
An introduction to the study of deviations in development from a cognitive, behavioral, and
biological perspective.

PY 629 Cognitive Neuroscience. Three hours.
The study of brain mechanisms of perception and thought through a variety of methodological
approaches (e.g., lesions, brain imaging, and normal subject experiments).

PY 631 Practicum in Psychology I. One to three hours.
Prerequisites: PY 619.
Supervised experience in psychotherapeutic procedures in an approved clinical facility;
seminars and case conferences.

PY 633 Practicum in Psychology III. Three hours.
Supervised experience in psychotherapy in groups.

PY 637 Practicum in Psychology VII. Three hours.
Supervised field placement in a forensic or criminal justice setting.

PY 639 Practicum in Psychology IX. One to three hours.
Prerequisites: PY 631 and PY 632.
Intensive experience with a variety of child and family disorders and therapy techniques.
Exposure to interdisciplinary treatment settings and personnel.

PY 641 Advanced Clinical Placement. One to three hours.
Prerequisites: PY 631 and PY 632. Supervised experience in an approved setting.
Primary clinical supervision by faculty or licensed psychologist at a placement facility.

PY 642 Practicum in Psychology XI. One to three hours.
Supervised experience in clinical geropsychology.

PY 645 Advanced Assessment Practicum. Three hours.
Provides practical experience in adult diagnostic and personality assessment.
PY 650 Cognition and Learning. Three hours. 
Contemporary approaches to cognition and learning. A broad survey, with in-depth looks at selected topics including attention and memory.

PY 651 Physiological Psychology. Three hours. 
Prerequisite: One year of biology desirable. 
Examination of bodily structures—nervous, muscular, and glandular—that underlie behavior.

PY 652 Life-Span Developmental Psychology. Three hours. 
An integrated view of the development, stability, and decline of several behavioral processes rooted in the physical growth, cognition, and socialization of the individual over the span of life.

PY 658 Psychopathology. Three hours. 
Prerequisite: PY 358. 
A survey of manifestations of abnormal behavior, and the diagnosis of abnormal behavior and mental disorders.

PY 659 Psychometrics. Three hours. 
Theoretical issues in the construction, evaluation, and application of psychological measures.

PY 664 Seminar in Psychometrics. One hour. 
Prerequisite: Clinical Psychology graduate student. 
Overview of Psychometric principles used to evaluate psychological test instruments.

PY 666 Child Treatment. Three hours. Prerequisite: PY 658. 
Examines diagnosis and treatment of childhood disorders from empirical, theoretical, and practical standpoints.

PY 668 Theory of Personality. Three hours. 
An examination of contemporary frames of reference relating to personality, with emphasis on contrasting implications of alternative personality interpretations.

PY 669 Seminar in Clinical Child Psychology. One hour. 
Issues in research and practice of clinical child psychology.

PY 670 Perception. Three hours. 
An introduction to issues and concepts in the study of perception. Fundamental theoretical and empirical controversies are analyzed.

PY 671 History and Systems in Psychology. Three hours. 
Systematic points of view placed in historical perspective.

PY 672 Advanced Social Psychology. Three hours. 
Major aspects of social psychology including attitude change, attribution theory, aggression, altruism, prejudice, interpersonal relations, and group dynamics.

PY 676 Criminal Forensic Assessment. Three hours. 
Familiarizes students with relevant issues in criminal forensic assessment and introduces them to current forensic assessment instruments.

PY 677 Correctional Psychology: Method, Theory, and Research. Three hours. 
A comprehensive review of psychological principles, theory, and techniques related to problems of crime, corrections, and offenders.

PY 678 Forensic Psychology. Three hours. 
The application of clinical psychology to forensic and legal issues. Competency to stand trial, criminal responsibility, testamentary capacity, jury decision making and dynamics, jury selection, and expert witness testimony.
PY 679 Seminar in Psychology/Law. One hour.
Issues in research and practice of psychology as related to the law.

PY 680 Psychopharmacology. Three hours.
Physiological bases and therapeutic action of psychotropic medications.

PY 681 Readings in Psychology. One to three hours.
Prerequisite: Permission and sponsorship of an instructor.
Selected supervised readings.

PY 687 Clinical Psychology of Aging. Three hours.
Prerequisite: Permission of the instructor.
A survey of clinical geropsychology including review of major disorders experienced by older adults, assessment issues, and treatments used in work with older adults.

PY 688 Seminar in Adult Clinical Psychology. One hour.
Issues in research and practice related to adult clinical psychology.

PY 690 Cultural Competency. Three hours.
This seminar emphasizes the role of ethnicity, class, culture, gender, sexual orientation, and disability in mental health, and the impact of these factors on assessment, diagnosis, and treatment.

PY 691 Seminar in Clinical Psychology. One to three hours.
Selected topics.

PY 693 Seminar in Advanced General Psychology. One to three hours.
Prerequisite: variable depending on topic.
Selected topics.

PY 695 Teaching of Psychology. Three hours.
Prerequisite: Permission of the department.
Principles of teaching and supervised experience.

PY 698 Graduate Research. One to three hours.
Independent research by the advanced graduate student.

The Department of Theatre and Dance is a fully accredited member of the National Association of Schools of Theatre (NAST), and all of its programs and policies are in accordance with NAST requirements. The department offers several programs leading to the master of fine arts (MFA) degree in theatre. The purpose of the MFA degree in theatre is to train students whose previous experience, demonstrated ability, and professional potential are sufficient to suggest a productive career in the theatre.

Admission Requirements

**General.** While the MFA degree has several areas of specialization, admission is granted in only one area. Admission to the MFA degree program in theatre requires satisfaction of all admission requirements as described in the Admission Criteria section of this catalog. (Note that no test scores are required). Also required is an interview, including audition and/or portfolio review. Certain areas have specific admission requirements as noted below.

The MFA degree program requires specialization in one area of production. Students in the program must be admitted to one of the following areas of study: acting pedagogy, directing, costume design/production, scene design, theatre management, lighting design, and technical production.

Subject to approval by the department chairperson and the dean of the Graduate School, in specified programs, a maximum of 20 semester hours of graduate work may be transferred from another institution. These hours must be in theatre or in a closely allied subject, and they must contribute to the student's educational objective. Should deficiencies in the student's undergraduate program be perceived, appropriate undergraduate courses will be required. While these undergraduate courses may not be counted toward the graduate degree, they may be taken in addition to the maximum allowable number of graduate hours.

The MFA program is normally a three-year program. Students who hold the M.A. degree in theatre upon admission to the program may expect a shortened course of study, dependent upon faculty evaluation of the previous work. Students seeking such a shortened program must apply to have previous work evaluated. Normally, a two-year minimum residency is required for students with shortened programs.

Degree Requirements

**General.** All students must follow Plan II (non-thesis) and complete 60 semester hours of graduate coursework for the degree. Continuation in the MFA degree program is contingent upon recommendation by the theatre faculty, following an annual review of the student's academic and production work. Students may be placed on probation following the review; students placed on probation have one semester in which to reestablish good academic standing. Under no circumstances will a student be permitted to continue in the program on probation for more than one semester.

The Department of Theatre and Dance uses contract advising, that requires each student in the department to develop a plan of study within six weeks of beginning the program, in conjunction with an assigned advisor from the student's area of specialization. The plan of study must meet the minimum requirements of the Graduate School and the Department of Theatre and Dance, and have the approval of the assigned advisor. While each plan is developed individually, examples of typical curricula are available on request from the department. A student with a .5 FTE departmental assistantship cannot take more than 12
hours and no less than 6 hours of graduate work during a semester or more than 6 hours in each term of the summer session.

Additional information is in the **Degree Requirements** section of this catalog.

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**Course Descriptions**

Prerequisites for 500- and 600-level courses: Graduate standing and permission of the instructor

**TH 515 Props Construction.** Three hours.  
A studio course which allows exploration into woodworking, metal working/welding, foam sculpting, casting, upholstery, Photoshop and any other process required to create stage props. Lab fee, $25.00.

**TH 520 Technical Direction-Graduate.** Three hours.  
This course will provide students with an overview of the technical design, construction techniques, and the administrative and management functions that are a part of the field of technical direction. Course may be repeated once.

**TH 521 Period Decor.** Three hours.  
A survey of period architecture, ornament, and furniture as applied in the stage designer's research.

**TH 523 Drafting for the Theatre.** Three hours.  
A studio course exploring traditional and computer based techniques of technical drafting as applied to the theatre. Skills learned will include orthographic and isometric projections, ground plans, sections, perspective drawing, and layout.

**TH 525 Scene Painting.** Three hours.  
A studio course in the materials and techniques for painting stage scenery and properties. Lab fee, $35.00. Course may be repeated once.

**TH 526 Sound Production Techniques for Theatre and Dance.** Three hours.  
A course providing a working knowledge of sound production, with an emphasis on the creation of sound files for theatre and dance and the setup and maintenance of sound reproduction and modification equipment. Lab fee, $25.00.

**TH 527 Computer Graphics for the Theatre.** Three hours.  
Prerequisite: Permission of the instructor.  
A study of computer drawing programs and computer-assisted design and drafting programs used in producing technical drawings for theatre. AutoCAD will be the primary program studied.

**TH 528 Drawing and Rendering.** Three hours.  
A studio course in drawing and painting architectural and natural environment appropriate for a variety of stage settings. May be repeated once.

**TH 530 History of Costume for the Stage.** Three hours.  
A historical study of civil costume in relation to costuming for the stage.

**TH 531 Costume Construction I.** Three hours.  
A studio course in patterning, cutting, and constructing costumes for the stage. Additional hours in related theatre activities are required. Lab fee, $25.00.

**TH 533 Costume Design I.** Three hours.  
A studio course in costume design principles and presentation for stage costumes.

**TH 535 Professional Presentation for Theatre Designers.** Three hours.  
The study and development of professional presentations for theatre artists. This includes, but is not limited to, "hard" portfolios, digital portfolios, exhibits and personal presentations.
TH 536 Fabric Modification. Three hours
A studio course exploring the use of various dyeing techniques, surface treatment and use of non-traditional materials to modify the original appearance and/or intent of fibers and fabrics.

TH 537 Drawing and Rendering for Theatre Designers. Three hours.
A studio course for drawing the human figure in a variety of stage settings and period garments. Exploration of a variety of media to render light, shadow, and textures for all types of fabrics and hard surfaces. Lab Fee, $25.00.

TH 539 Advanced Stage Makeup. Three hours.
A studio course using a variety of materials in the craft of mask making, hair ventilating, and prosthetics. Lab fee, $25.00.

TH 540 Stage Movement and Physical Acting. Three hours.
An advanced course in body awareness, alignment, breathing techniques, physicalization, and physical characterization.

TH 541 Advanced Scene Study. Three hours.
Advanced course in specific methodologies for character conception and projection.

TH 542 Careers in the Professional Theatre. Three hours.
A course focusing on audition and interview techniques, unions, résumé writing, and other skills required to apply for positions in the academic and professional theatre.

TH 543 Script Analysis and Interpretation. Three hours.
Theory and methodology of the textual analysis of playscripts for production. Offered every three years.

TH 544 Period Acting Styles I. Three hours.
Study and practice of period acting styles.

TH 545 Period Acting Styles II. Three hours.
A continuation of TH 544, usually focusing on verse drama, especially Shakespeare.

TH 546 Advanced Voice and Speech for Performance. Three hours.
This course will examine vocal anatomy and physiology, vocal health and care for the performer's voice. Various methods and approaches to voice work using breath, text, speech work, and study of the International Phonetic Alphabet. Students will explore their vocal development through exercises, drills; performance and use of heighten text language.

TH 547 Stage Dialects. Three hours.
Prerequisite: TH 546.
An advanced voice and speech course studying the phonetics of various dialects and accents used by actors needed to create certain roles. Students will apply the dialect/accent work to exercises, drills, and acting/performance projects.

TH 548 Rehearsal Process. Three hours.
Acting course in which students analyze and participate in the rehearsal process with both unpublished and published scripts.

TH 549 Advanced Stage Movement: Stage Combat. Three hours.
Students will learn to create safely the illusion of armed violence including work with the broad sword, small sword, rapier/dagger, and knife.

TH 551 History of the Theatre I. Three hours.
Beginnings to the Restoration. Offered every fall semester.

TH 552 History of the Theatre II. Three hours.
Restoration to the present. Offered every spring semester.

TH 553 European Theatre History. Three hours.
Special topics relating to Western theatre. Examples include the commedia dell'arte, European sources of the modern theatre, studies in Brecht, the avant-garde theatre, etc.

**TH 554 Seminar in Contemporary Theatre.** Three hours. An examination of trends and developments in the theatre and drama since the Vietnam Era. Offered every three years.

**TH 555 Seminar in Theatre History and Literature: Classical.** Three hours. The theatre and drama of ancient Greece and Rome.

**TH 556 Seminar in Theatre History and Literature: Elizabethan, Jacobean, and Carolinian.** Three hours. The English theatre and drama from 1558 to 1642.

**TH 557 Seminar in Theatre History and Literature: American.** Three hours. Theatre and drama in the United States from its beginnings. Special focus on 19th-century developments and current post-modern adaptations of earlier plays and forms. Offered every three years.

**TH 558 American Feminist Theatre.** Three hours. Explores 20th century American feminist theatre. Prerequisites TH 120 or by approval from instructor.

**TH 559 Dance/Movement for the Graduate Actor.** Three hours. A class focusing on dance technique emphasizing work in correct body alignment, improvisation, flexibility, strengthening exercises, and performance. Students will be taught dance combinations in classical jazz and musical theatre dance to enhance technical skills and prepare them for professional work. The history and development of jazz dance will also be explored. In addition, the use of Laban Movement Analysis will be explored as a theoretical framework for analyzing movement in order to benefit the graduate-level acting student in honing his/her craft and preparing for his/her career.

**TH 565 Musical Theatre Performance I.** Three hours. Musical theatre scene study for the actor and director; the blending of acting, singing, and movement skills in the performance of songs and scenes.

**TH 566 Musical Theatre Performance II.** Three hours. A special topics course for the actor and director, exploring such areas as musical theatre history, cabaret performance, the in-depth study of a single work, etc.

**TH 567 Musical Theatre Repertoire Coaching.** One to two hours. Individual coaching in musical theatre repertoire and the preparation of material for auditions, principal roles, cabaret performances, and recordings.

**TH 570 Theatre Management.** Three hours. Principles of theatre/arts management applied to the fields of theatre operations and production, with emphasis on mission, organizational structure, financial management, development, marketing, touring, labor relations and facilities.

**TH 582 Playwriting I.** Three hours. An introduction to writing for the stage, from dramatic conception to finished script. Offered alternating years with TH 583.

**TH 583 Playwriting II.** Three hours. Advanced course in playwriting; concentration on various play forms, draft revision, and the script development process. Offered alternating years with TH 582.

**TH 586 Dramatic Theory and Criticism.** Three hours. A survey of the major critical and performance theories, with special emphasis on Aristotelian and 20th century approaches. Includes study and practice of reviewing dramatic productions. Offered every three years.
**TH 600 Advanced Practicum.** One hour.
Execution of significant creative assignments in main stage and/or A. B. Theatre productions throughout the term.

**TH 602 Theatre Management: Internship.** Variable hours.
Prerequisites: TH 570 and completion of 18 hours in the MFA program. Professional experience with a professional theatre company or arts organization. Course may be repeated twice for a maximum of 10 hours.

**TH 615 Lighting Design I.** Three hours.
A thorough study of the technical aspects of stage lighting, including electricity, optics, color, control theory, and light-plotting techniques.

**TH 616 Lighting Design II.** Three hours.
An advanced course covering the theory and practice of lighting design for the theatre, with an emphasis on script analysis and execution.

**TH 618 Lighting Design III.** Three hours.
A seminar involving the presentation of designs for various productions and preparation of problem-related demonstrations. May be repeated.

**TH 620 Structural Design for Theatre.** Three hours.
A concentration on mathematical problem solving, the study of structural design and its application to theatrical structures, and an investigation of why we build scenery the way we do.

**TH 621 History of Stage Design.** Three hours.
A survey of the history of stage design and development of stage technology, suitable for all MFA design and technical students. Includes several historically related design projects. May be repeated once.

**TH 622 Scene Design I.** Three hours.
A studio course in scenic design for the theatre. Students will execute designs for several plays focusing on analysis, graphic representations, and portfolio building.

**TH 623 Scene Design II.** Three hours.
A continuation and intensification of the material in TH 622. Attention given to script analysis and complete design drawing, plus design for varied forms of stages. Course may be repeated once.

**TH 628 Problems in Theatre Arts: Design.** Three hours. An intensive study of the designer's responsibility involving design for varied forms of staging and design drafting.

**TH 632 Costume Construction II.** Three hours.
A studio course in advanced costume construction and draping techniques. May be repeated. Lab fee, $25.00.

**TH 634 Costume Design II.** Three hours.
A continuation and intensification of the material in TH 533. Projects will address specific problems of design. May be repeated. Lab fee, $25.00.

**TH 635 Costume Design III.** Three hours.
Continuation of TH 634. Projects address larger and more specific problems in design.

**TH 636 Costume Design IV.** Three hours.
Continuation of TH 635.

**TH 637 Period Costume Construction.** Three hours.
Prerequisites: TH 531, TH 632. A studio course in the patterning, fit, and construction of garments popular prior to the 20th century.
TH 638 Advanced Tailoring Techniques for Theatre. Three hours. 
Prerequisite: Permission of the instructor. 
A studio course in both hand and machine tailoring techniques needed to produce high quality custom tailored garments for the stage. This includes, but is not limited to hand padding, machine padding, decorative and couture techniques. Lab Fee, $25.00.

TH 639 Problems in Theatre Arts: Costuming. Three hours. 
Study and studio work in a specialized area of costume design or technology.

TH 640 Problems in Theatre Arts: Stage Movement. Three hours. 
Prerequisite: TH 540 or permission of the instructor. 
Advanced theory and practice in stage movement topics such as anatomy, clowning, mask, stage combat, mime, etc. May be repeated for credit when the topic differs.

TH 642 Teaching Acting. Three hours. 
A course to provide practical experience in teaching and coaching actors and developing methods and various approaches in teaching acting.

TH 643 Teaching Practicum. Three hours. 
Prerequisites: TH 642 and permission of the instructor. 
A course covering the practical aspects of teaching, including syllabi preparation, course planning, and classroom experience.

Advanced theory and practical application of performance techniques.

TH 662 History of Directing. Three hours. 
Historical development of directing theory and methodology since Saxe-Meiningen.

TH 669 Problems in Theatre Arts: Directing. Three hours. 
Advanced theory and practical application of directing techniques.

TH 673 Fund-raising and Financial Management. Three hours. 
A study of fundraising and financial management of nonprofit and commercial arts organizations with an emphasis on development, grant writing, forecasting, and planning.

TH 674 Arts Advocacy, Policy, and Public Relations. Three hours. 
A study of the history and manifestation of public arts policy in the United States, with emphasis placed on arts advocacy, governmental and organizational policies, and public relations tactics and campaigns.

TH 675 Business and Legal Issues in the Arts. Three hours. 
An examination of legal requirements of nonprofit arts organizations, specifically addressing tax exemption, reporting of contributions, development considerations, and contemporary legal issues affecting artists.

TH 676 Marketing the Arts. Three hours. 
A study of contemporary marketing practices and how they are applied to nonprofit and commercial arts organizations. Special emphasis on marketing analyses, forecasting, social media, advertising and marketing campaigns.

TH 679 Problems in Theatre Arts: Management. Three hours. 
Directed studies in specific management techniques and theoretical development of theatre projects.

TH 683 Problems in Theatre Arts: Playwriting. Three hours. 
Specific topics such as the historical play, New Dramaturgy, and writing; workshops with visiting writers from the New Playwrights Program.

TH 684 Problems in Theatre Arts: Dramaturgy. Three hours.
**TH 690 Independent Study.** Three hours.

**TH 698 Research not Related to Thesis.** Three hours.
7.1 GRADUATE PROGRAMS

The Manderson Graduate School of Business is the graduate division of the Culverhouse College of Commerce and Business Administration. The mission of the College is to excel in the creation, dissemination, and application of business knowledge. The faculty of the Manderson Graduate School of Business offer six graduate degrees: the master of business administration (MBA), master of accountancy (MMA), master of tax accounting (MTA), master of arts (MA), master of science (MS), and doctor of philosophy (PhD).

The masters’ degrees may serve as terminal professional degrees; that is, they are designed primarily for people who plan professional careers in business, government, or nonprofit organizations. They may also function as preparatory programs for doctoral-level work.

The doctor of philosophy program prepares graduates for careers as college or university professors or as professional researchers. The PhD requires an extensive, in-depth knowledge of the major field of study, a supporting minor field of study, and a specialized knowledge of statistical and quantitative techniques necessary for the advancement of knowledge in business and economics. A doctoral dissertation is required.

An applicant for graduate study must meet both the general requirements of The University of Alabama Graduate School (Admission Criteria) and the standards set by the program to which the student is seeking admission. Successful applicants are admitted to a specific program of study as stated on the application. A student who wishes to pursue a new degree or change the major field of study is required to submit a new application.

Graduate students in business are expected to exhibit a high level of integrity and professionalism in all aspects of their programs, including relationships with other students and faculty. Students who are deemed by their program director or faculty not to exhibit these characteristics or who are deemed not to be making satisfactory progress toward completion of degree requirements may be terminated from their degree programs.

Programs offered through the Manderson Graduate School of Business are accredited by the AACSB International—The Association to Advance Collegiate Schools of Business.
7.2 FACILITIES

The Culverhouse College of Commerce and Business Administration complex consists of three buildings located in the central University campus. Mary Hewell Alston Hall, which was completed in 1991, houses faculty and administrative offices, seminar rooms, and four technologically innovative classrooms. The Angelo Bruno Business Library and Sloan Y. Bashinsky Sr. Computer Center was occupied in January 1994. This integrated business information center includes the expanded business library, three hands-on computer classrooms, and open computer labs for undergraduate and graduate students. Bidgood Hall, the traditional home of the College, reopened in January 1994 after extensive renovations. This building now houses 28 multimedia classrooms and two classrooms equipped to telecast and receive distance learning classes. The business complex is equipped with a wireless network allowing full Internet access from laptops and other equipped devices. Bidgood Hall also houses the offices of the Manderson Graduate School of Business, office space and group study facilities for graduate students, and the research centers affiliated with the College.

Angelo Bruno Business Library

The Angelo Bruno Business Library serves the business information needs of The University of Alabama and in particular the students and faculty of the Culverhouse College of Commerce and Business Administration (C&BA) and the Manderson Graduate School of Business. The library serves over 400,000 visitors each year, which represents repeated use by C&BA students, faculty, staff, and others from the University community and beyond. The 64,000 square-foot facility is conveniently located on Stadium Drive within the C&BA complex and also houses the College's Sloan Y. Bashinsky Sr. Computer Center. Combining business library services and business computer laboratory services in the same facility provides seamless access to information services for business students.

The Bruno Library's resources comprise a wide variety of online computer databases and over 190,000 volumes, including hundreds of business periodicals in electronic or print formats. The Library is a fully networked environment offering enhanced access to electronic information sources. A wireless network facilitates students' use of their laptop computers for accessing many business library databases from anywhere in the library and the C&BA complex. Library faculty and staff offer users specialized information assistance and services and individual and class instruction in library research and effective use of library databases. Special features include an electronic library instruction classroom and a variety of seating and study accommodations, including group study rooms for team assignments. The Bruno website provides convenient access to library resources, including specially licensed business databases, the library catalog, and the World Wide Web.

The Bruno Library's databases, books, journals, and special collections offer excellent support of the C&BA teaching and research fields in business, economics, finance, accounting, information systems, and statistics. Full-text access to business-related periodicals and newspapers is available through such databases as ABI/Inform, Business Source Premier, Factiva.com, and LexisNexis. Extensive worldwide data on publicly traded securities of all kinds is available from Bloomberg Financial Markets and News. Other resources provide coverage of important topics such as company financial data, industry profiles, international business, and tax regulations and cases. The Bruno Library's extensive collection of historical corporate annual reports has received national recognition.

The Angelo Bruno Business Library provides convenient access to information resources through technologically advanced as well as traditional means. User service is a major emphasis. Our goals are to tailor our collections and services to meet the needs of C&BA undergraduate and graduate students and faculty and to deliver the best possible mix of traditional and technologically advanced library services.

Technology Group

The Technology Group was established in 1984 to provide computing facilities for the College
of Business Administration students and faculty. The C&BA network connects over 400 lab and desktop computers to the campus network and the Internet. Our network file servers provide access to dozens of powerful applications specific to the various disciplines of the College. There are 7 professional staff and 40 student employees available to provide technical assistance to our faculty, staff, and student users.

The Bashinsky Lab, completed in 1994, offers a 20-seat collaborative multimedia facility, two 40-workstation multimedia classrooms, a 60-workstation open lab and a 20-workstation graduate lab. The E-Commerce Lab in Bidgood Hall was completed in 2001 and provides 16 group workstations. A Special Projects Lab was also completed in 2001. This lab provides students working on class projects with 10 workstations, an LCD projector, and a conference table.

There are 27 multimedia classrooms within the College featuring high-resolution projectors, PA system, wireless microphones, DVD, VHS, and access to all network resources. Training is available to faculty and staff on the usage of these classrooms.

The Technology Group provides support for faculty, staff, and student e-mail accounts, Web accounts, ftp, and personal network storage. They also support color laser network printing, college-wide wireless computing, and remote access for faculty and staff. Faculty can also obtain support for Web and presentation development, imaging, and video services.

Detailed information on the services offered by the Technology Group is available at the website of the Culverhouse College of Commerce and Business Administration.
The Center for Business and Economic Research (CBER) in the Culverhouse College of Commerce conducts research on state, regional, and national economic and demographic topics. It also serves as the central reservoir within the state of Alabama for business, economic, and demographic data. Since its creation in 1930, CBER has engaged in research programs to promote economic development within the state, while continuously expanding and refining its broad base of socioeconomic information and statistics from federal, state, local, and private sources.

CBER’s funded research includes economic impact studies; demographic studies incorporating population projections and GIS mapping; economic forecasts; economic development and regional planning; workforce analysis; transportation corridor socioeconomic studies; policy analysis; industry analysis; environmental economics; environmental justice analysis; and local area profiles. In partnership with the Capstone Poll, the Center conducts surveys for funded research projects. CBER staff responds to queries for specific business, economic, and demographic information on Alabama, the region, and the nation. Additionally, the results of CBER-originated special projects and ongoing programs are frequently used to meet information needs of data users in the public and private sectors.

The Alabama State Data Center (ASDC), housed within CBER, provides an important link with the U.S. Census Bureau. In this official capacity, CBER is called on to provide state-specific information and assistance to the Census Bureau and in turn receives embargoed data releases and other timely information as well as training workshops and webinars for Center staff. CBER coordinates a network of 25 ASDC affiliates that provide convenient access to census and other socioeconomic data across the state. The center maintains current and historical files of data compiled from Census Bureau and other sources on its website. The center also provides customized extractions and analysis of Census data that would not otherwise be available.

Under the Federal-State Cooperative Programs for Population Estimates and Projections, CBER furnishes the Census Bureau with group quarters and vital events data for annual Alabama county estimates and develops state and county population projections. Through this participation and the historic need for reliable population estimates and projections, CBER has engaged in population research for more than 30 years. This experience, coupled with the rising demand for detailed demographic data and projections, has made CBER a leader in demographic work within the state.

As a part of the effort to track the level of economic activity in Alabama, CBER has developed econometric models of the Alabama economy as well as regional and county level models. The state model was constructed and tested in the late 1970s and first exercised in 1980 to produce short- and long-term forecasts of the economy by industry group; output includes Alabama gross domestic product, employment, personal income, and wages. The models are continuously revised and refined to reflect the changing structure of the state's economy. Forecasts from the model are published in the annual Alabama Economic Outlook and in quarterly updates. They are also used in funded research projects.

The center’s annual Economic Outlook Conference, held in Montgomery during January, is sponsored by both public agencies and private industry. Conference participants are presented with an up-to-date assessment of prospects for the U.S. and Alabama economies during the coming year, with other relevant topics covered in a luncheon address. The Alabama Economic Outlook is released at this event.
CBER has an active publications program, which is delivered by email and posted online. Ongoing continuously since the 1930s, *Alabama Business* features analysis and results of the center's quarterly forecast update. CBER also publishes *Research Notes*, a compilation of current research grant opportunities targeted to Culverhouse faculty and staff. Newsletters and other reports and products are designed and published in-house.

Since 2002 CBER has administered and analyzed the *Alabama Business Confidence Index* (ABCI). This quarterly online survey of business executives across the state gauges sentiment about the economic environment and industry prospects for the upcoming quarter compared to the current quarter. Results of the survey are delivered in newsletter format and are tallied for the state as a whole and for the Birmingham-Hoover, Huntsville, Mobile, and Montgomery metro areas. CBER partners with the primary business organization in each of these metro areas to recruit and retain ABCI panelists and disseminate survey results. Communication with registered panelists is via email and results newsletters are posted to the CBER website.

Access to information about the center and to its publications, analyses, and data products is available on the CBER website at http://cber.cba.ua.edu. Users can read, print, or download center newsletters as well as obtain current and historical data on Alabama's population, employment, income, and other socioeconomic indicators.

**William R. Bennett Alabama International Trade Center**

The William R. Bennett Alabama International Trade Center (AITC) is a nonprofit organization dedicated to the development of international business activity. The trade center actively seeks international opportunities to assist firms and public agencies in successfully concluding business agreements and international projects. Since its creation in 1979, under the auspices of the College of Commerce and Business Administration, AITC has served more than 4,500 firms in a variety of international marketing areas, including international market research, strategic planning, and consulting.

Internships are available at AITC for students with experience or academic training in international business.

**Alabama Productivity Center**

The Alabama Productivity Center is a vehicle for improving productivity in manufacturing and service firms throughout the state. One of its primary activities is to coordinate applied-research projects in which University faculty and students work jointly with a company's management and labor to resolve specific marketing, production, or other operational problems. These projects have simultaneously a research/educational focus and a real-world mission. Academic benefits include thesis topics, scholarly articles, research assistantships, and permanent employment contacts. Other activities of the center include conducting basic research in productivity analysis and improvement technologies and administering a state productivity and quality award.

**Alabama Real Estate Research and Education Center**

The Alabama Real Estate Research and Education Center (ARERECC) is a state of the art, comprehensive research and education facility designed to support Alabama's real estate industry and the state's overall economic development efforts. The center serves as a clearinghouse for real estate expertise and a depository for local, state, and national data that can be used to provide real estate decision makers with site selection, feasibility, and market area analyses.

The center also offers professional real estate education for practitioners and conducts academic research on real estate related topics, real estate markets, and housing policy issues that impact both real estate professionals and the consumer.

**Enterprise Integration Lab**

The EIL was founded by C&BA in 1996 to help business organizations seamlessly integrate
business activities using information technology (IT). Confronted with global market demands and evolving IT, the EIL's mission is to develop business best practices for sharing, managing, controlling, and coordinating business data, work practices, and networks. To accomplish this goal, the lab performs:

- basic research to expand the fundamental knowledge related to developing complex management information systems
- applied research to examine how to align theoretical concepts with constraints of the real world
- business outreach to aid business in applying accepted best practices
- education to transfer best practices using state of the art techniques and methods

Each of these areas nurtures the others. The results of the lab's basic research is intended to provide the fundamental tenets that are used to solve real business issues for the first time (applied research). Once these tenets are used and their value substantiated, they become the basis for generalized outreach projects. Outreach projects serve a broad segment of the business community and provide experiential education to students through real-world consulting assignments.

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**Garner Center for Current Accounting Issues**

The Garner Center was established within the Culverhouse School of Accountancy in 1988. The center has been successful in fostering and enhancing accounting research and education by providing a focal point for scholarly activities and a vehicle for faculty efforts to address accounting issues. In particular, the center hosts a speaker series to facilitate interaction among faculty, students, and professional accountants. The Garner Center also houses the International Academy of Accounting Historians.

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**Human Resources Institute**

The Human Resources Institute, a unit of the Manderson Graduate School of Business, was organized in January 1972. Through the institute, the University seeks to contribute to the development, upgrading, and effective utilization of human resources in the state, region, and nation. The mechanisms utilized to accomplish these goals include both individual and contract research; training programs for labor, management, and governmental groups; technical assistance programs for private- and public-sector organizations; and the publication and national distribution of research monographs, papers, and proceedings. The institute houses the Alabama Chapter of the Industrial Relations Research Association.

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**Hess Institute for Retailing Development**

The Hess Institute for Retailing Development is based in the Department of Management and Marketing. The initial contribution of funds for the establishment of the institute was made by Parisian Inc. of Birmingham.

The primary objective of the institute is to provide better quality teaching, research, and service to companies that make up the retailing industry. To accomplish this objective, faculty talent and expertise are used to address the needs of both the business and student markets. The Hess Institute sponsors three major annual events—Retailing Day, Retailing Week, and the Annual Marketing Symposium—that bring together students, academicians, and retailing practitioners so all will benefit through interaction and exchange of ideas.

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**Institute of Business Intelligence**

The Institute of Business Intelligence (IBI) is an applied research institute partnered with the latest vendors and industry users of enterprise products covering the entire spectrum of the business intelligence process in general, and the knowledge discovery and data mining process in particular. The IBI contains an extensive suite of industry leading tools for database, data cleansing, data quality analysis, data preparation and aggregation, statistical analysis, data mining predictive modeling, and data visualization. In addition, the IBI has experienced academic and student staff extensively trained in the practical use of these tools.
technologies. The Institute serves as a key focal point for University/industry partnerships in applied research in data mining and knowledge discovery.

MBA Association (MBAA)
The MBA Association (MBAA) was established to assist in the professional development and program enrichment of MBA students in the Manderson Graduate School of Business. Membership includes first and second-year MBA students, and the association supports a learning environment of fellowship, social interaction, and program enhancement. The MBAA sponsors professional development programming, alumni and community events, corporate outreach, and philanthropic initiatives as well as coordinates social, cultural, athletic and other activities.

Small Business Development Center
The Small Business Development Center (SBDC), a service arm of the College since 1981, works to improve the economy and quality of life of West Alabama by developing new small businesses and helping existing businesses expand. Assisting 200 to 300 new or existing businesses each year, SBDC provides entrepreneurs with education and training opportunities that cover a wide range of business topics. Specifically, SBDC is available to assist new or existing firms in devising business plans, assessing new markets, answering basic start-up questions, and addressing other needs. Counseling, workshop training, and information transfer form the core of SBDC activities. SBDC's location within the College encourages maximum benefit from the College's extensive business resources. Faculty, graduate and undergraduate students, library holdings, and other College units (for example, the Center for Business and Economic Research) support SBDC's service mission.
7.4 MASTER'S DEGREE REQUIREMENTS

7.4.1 Admission Requirements
Master's degrees offered through the Manderson Graduate School of Business reflect a diverse range of missions and objectives. Enrollment in all master's programs is limited and competitive. Admissions are supervised by committees of the graduate faculty in each of the academic programs. The minimum admission requirements are (a) admission to the Graduate School of The University of Alabama, (b) an acceptable score on the Graduate Management Admissions Test (GMAT) or the Graduate Record Exam (GRE) and (c) completion of an appropriate undergraduate degree. A particular master's program may establish higher standards and/or specific prerequisites for admission. Further information about the requirements for admission to master's programs is included in the section of this catalog pertaining to each specific master's degree and major field or curriculum. Also, students are encouraged to visit the Manderson Graduate School web site and the Graduate Catalog's section on admission criteria for current information about degree programs.

7.4.2 Degree Requirements
Graduate students must meet all the degree requirements of The University of Alabama Graduate School pertaining to the master's degree. Exceptions to the requirements for the master's degree may be made only with the approval of the faculty coordinator of the specific degree program, or the director of graduate studies, and the dean of the Graduate School.

7.4.3 Second Degree Requirements
A student may concurrently pursue two master's degree programs when such a combination is consistent with the student's career and educational objectives. A maximum of six semester hours of eligible credits earned toward one master's degree may be applied to the requirements for a second master's degree. Accordingly, a student who is interested in combined programs is advised to meet with the faculty coordinator of each degree program before enrolling, since careful planning is required to achieve a successful combination of two degrees.
Objective. The objective of the Alabama MBA program is to prepare high-achieving, high-potential students for successful business careers in a globally competitive environment. The Alabama MBA is a full-time, selective admission program with a commitment to providing a high value-added experience, innovative relationship-intensive programs within a diverse and collaborative learning environment. The curriculum emphasizes fundamental business concepts, knowledge and skills through an interdisciplinary perspective. Case studies, projects, teamwork and technology contribute to a dynamic applied learning environment. A concentration selected by the student allows for specialization in an area of focus aligned with his or her desired career path.

Admission Requirements. Admission to the MBA program requires a bachelor's degree from a regionally accredited college or university. Applicants also must show evidence of career interest in management. Relevant employment experience may be considered in the admissions decision but is not a prerequisite. GMAT or GRE scores are required. Candidates who have already completed a post-baccalaureate degree or who have seven years or more of appropriate full-time post-baccalaureate work experience may request a GMAT/GRE waiver. Strong quantitative and verbal skills are required. Students are encouraged to provide evidence of those skills, especially if they are not evident in other application materials. Students whose native language is not English are required to complete the Test of English as a Foreign Language (TOEFL).

Following an initial review of completed application materials, qualified applicants are asked to arrange campus interviews. When campus interviews are not feasible, phone interviews may be substituted. Admission recommendations are made by a faculty admissions committee after reviewing a candidate's application materials and are based on an assessment of the candidate's suitability for the Manderson MBA program; the Graduate School makes the final determination on each applicant's recommendation by the faculty admissions committee. A strong academic record is a necessary but not a sufficient criterion for admission. Applications should be submitted by April 15 prior to the fall of the year of intended enrollment. Applications received prior to February 15 will receive priority for financial assistance. Students must begin the program in the fall semester and must be enrolled for four consecutive semesters plus the summer of the intervening year. During the summer, students are expected to be involved in meaningful internships to further enhance their professional experiences.

A student entering the MBA program is expected to have a good working knowledge of word-processing and spreadsheet software.

Program and Degree Requirements. The MBA is a full-time, two-year program in which students take core, concentration and elective courses. The number of hours required for the degree varies by concentration with a minimum of 48 hours. Students take a prescribed program of courses and cross-discipline work that blends the analytical tools of management and the functional areas of business into a general management perspective. Topics include accounting, economics, finance, management, marketing, operations, strategy, communications, information systems, and statistics. In addition, each student pursues elective courses leading to a mandatory area of concentration. All course selections for the area of concentration must be made with the advice of a designated graduate faculty member in the concentration. Teaching methods combine cases, lecture-discussion, and projects. The small size of the program allows faculty members to utilize a variety of techniques for enhancing learning.
**Concentration Requirements.** The MBA Program offers students a variety of established concentrations, as well as the opportunity to design an individualized study program. Admission to the MBA program does not guarantee acceptance to a specific concentration. Admission to certain concentrations may require a student to participate in additional application procedures including faculty interviews, completion of specific degree requirements, minimum test scores/GPA, and/or specific work requirements. More information about admission to concentrations may be obtained by contacting the director of the MBA Program.

**STEM Business Honors.** During each semester of their four years of undergraduate study, students enroll in a 1.5 credit-hour STEM Business Honors course. These honors courses focus on communication and leadership skills. Students work in teams on community projects to develop an appreciation and basic understanding of the importance of management skills in science and technology careers and to create an opportunity to interact with other STEM students, as well as executives from technology companies and MBA faculty members.

The STEM Business Honors courses are taught by a faculty member who is assigned to the cohort in the freshman year, and works with them through their senior year. This provides continuity of contact and allows the faculty mentor to track the students through the program.

During the sophomore, junior and senior years, STEM discipline students can expect to be off-campus and involved in internships, cooperative-learning experiences and other online learning activities. The STEM Business Honors courses include extensive use of digital technology - streaming video of presentations from guest speakers; teleconferencing for student presentations and class meetings using Skype and similar technologies; and the use of course-management software that allows off-campus students to remain engaged and participate in coursework.

**Executive MBA (EMBA) Weekend Program.** The Executive MBA program provides working professionals with the tools, skills, and knowledge essential for expanding and/or pursuing new career options in business. Weekend classes allow students to pursue the MBA degree without sacrificing current employment. This program requires 48 hours of course study in a cohort, general management format. Classes meet on Fridays and Saturdays usually twice a month, including an international trip/experience in the fourth term where students will visit with the senior management of global companies of a particular country. Technology is used to enhance classroom learning and to facilitate student and faculty interaction when students are away from campus. On occasion, classes may be held in nearby cities.

**Dual Degrees:**

**JD/MBA Joint Degree Program in Law and Business.** The University of Alabama School of Law and the Manderson Graduate School of Business offer students who are interested in combined business and legal career opportunities a law and MBA curriculum culminating in the awarding of the juris doctor (JD) and MBA degrees within four years. Admission is required into both programs. Further information about the joint JD/MBA Program may be obtained by contacting the director of the MBA Program and/or the Law School admissions office as well as by visiting the respective websites.

**MBA Dual Degrees in Engineering.** The Manderson Graduate School of Business and the College of Engineering offer students from an engineering background an opportunity to receive both their MBA and Master's in Engineering (Civil or Mechanical) within two calendar years. Prospective students must be admitted to both programs before being allowed to pursue the dual curriculum. Further information about the dual MBA/ENG programs may be obtained by contacting the director of the MBA Program and/or the Engineering admissions office as well as by visiting the respective websites.

**MBA/MFA Dual Degree.** The Manderson Graduate School of Business and the College of Arts and Sciences offer students an opportunity to receive both their MBA and their Master's in Fine Arts (Theater Management) within four years. Prospective students must be admitted
to both programs before being allowed to pursue the dual curriculum. Further information about the dual MBA/MFA program may be obtained by contacting the director of the MBA Program and/or the Theater Management office as well as by visiting the respective websites.

**Admission is Selective.** Five years of work experience at a significant level of responsibility are recommended for applicants. Applicants should have access to a computer when away from campus and a working knowledge of electronic communication and data management. A satisfactory score on the Graduate Management Admissions Test (GMAT) or GRE, and a bachelor's degree from a regionally accredited college or university of fully recognized standing (or equivalent) are required for admission. Candidates who have already completed a post-baccalaureate degree or who have seven years or more of appropriate full-time post-baccalaureate work experience may request a GMAT/GRE waiver. Further information may be obtained from the director of Manderson Graduate School of Business.

Admission to Candidacy. Admission to the Graduate School does not imply admission of a student to candidacy for a degree. Admission to candidacy is contingent upon the recommendation of the student's department and the approval of the graduate dean.

The application for **Admission to Candidacy for the Master's Degree** should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama. It must be approved by the time of registration for the semester in which requirements for the degree are completed.

See the online Graduate Catalog's section on **Degree Requirements** for information on Admission to Candidacy and details of requirements for all degrees offered in the Manderson Graduate School of Business.
Admission requirements. Before admission to the program, students should have completed the following accounting courses or their equivalents:

- AC 310 Financial Reporting and Analysis of Business Activities I
- AC 311 Financial Reporting and Analysis of Business Activities II
- AC 361 Cost Analysis for Planning and Control
- AC 371 Introduction to Taxation
- AC 389 Accounting Information Systems Development, Operation and Control
- AC 432 Introduction to Corporate Governance, Risk Assessment, and Assurance Services

Additional information is in the Admission Criteria section of this catalog.

Degree requirements. The master of accountancy degree program is a fifth-year professional program. The objective of the program is to provide students with greater breadth and depth of understanding in accounting and business than is possible in an undergraduate program. The program prepares students for careers as professional accountants in financial institutions, government, industry, nonprofit organizations, and public practice. Graduates are prepared to research various databases related to troublesome accounting problems, and to exercise judgment in making accounting-related decisions by drawing on their integrated, comprehensive body of accounting and business knowledge. Students are required to complete a minimum of 30 hours of approved coursework beyond the undergraduate degree. A minimum of 24 hours must be taken in courses open only to graduate students.

The following courses are required for the MMA degree. A minimum of 21 hours of accounting courses (required and elective) must be completed. Electives in areas other than accounting are chosen in consultation with the student's advisor and vary based on students' backgrounds and interests. The School of Accountancy will not accept more than six hours of transfer graduate credit from master students.

Course requirements for MMA program. Students must take a minimum of 30 hours of graduate courses, including a minimum of 21 hours of accounting courses. Electives must be approved by the coordinator of the MMA program.

**Required Accounting courses** (21 semester hours)

- AC 512 Advanced Financial Reporting and Analysis
- AC 523 Business Valuation and Performance Measurement
- AC 532 Advanced Governance, Risk Assessment, and Assurance
- AC 534 Fraud and Ethics Risk Management
- AC 554 Professional Certification
- AC 561 Accounting for Business Management
- AC 589 Systems Analysis and Control

*Students cannot receive graduate credit for a course if they have taken an equivalent course at the undergraduate level. Another accounting course should be substituted with the approval of the coordinator of the MMA program. Students who have not taken AC 456 and AC 471 or their equivalents must take AC 456 or AC 556 and AC 471 or AC 571.

MMA students may take one of the following tax courses:

- AC 571 Taxation of Business Organizations
- AC 593 Research and Communication in Taxation

**Other required course** (3 semester hours)
LGS 504 Legal Issues in Accounting

Electives (up to 6 semester hours)

Master of Tax Accounting (MTA) degree. The master of tax accounting (MTA) degree program is a multidimensional approach to the education of the modern tax specialist. The program develops an understanding of the taxation system and the interrelationships that exist between that system and accounting theory; a basic knowledge of the legal system as it relates to taxation; and the basic tools necessary for research and communication in taxation. Graduates are prepared to research various tax, legal, and accounting databases related to troublesome tax problems and to exercise judgment in making tax-related decisions by drawing on their integrated, comprehensive knowledge of accounting and taxation.

Admission requirements. Before final admission to the program, students should have completed the following courses or their equivalents:

- AC 310 Financial Reporting and Analysis of Business Activities I
- AC 311 Financial Reporting and Analysis of Business Activities II
- AC 361 Cost Analysis for Planning and Controlling
- AC 371 Introduction to Taxation
- AC 389 Accounting Information Systems Development, Operation and Control
- AC 432 Introduction to Corporate Governance, Risk Assessment, and Assurance Services
- AC 471 Taxation of Business Transactions and Organizations

Degree requirements. Students are required to complete a minimum of 30 hours of approved coursework beyond the undergraduate degree. At least 18 of these hours must be in coursework in the major field. A minimum of 24 hours must be taken in courses open only to graduate students, and 15 of these must be in courses in accounting and taxation at The University of Alabama. Students who will sit for the CPA exam in Alabama are required to take AC 456 Governmental and Nonprofit Accounting as part of their undergraduate or graduate program. To receive the master of tax accounting degree, the student must complete the required core courses with an average grade of "B" or better, and must maintain an average grade of "B" or better in all required accounting courses. The following core courses are required for the MTA degree:

**Required courses** (12 hours)
- AC 575 Taxation of Corporations and Shareholders 3
- AC 576 Advanced Corporate Taxation 3
- AC 578 Partnership Taxation 3
- AC 593 Research and Communication in Taxation 3

**Electives** (18 hours)
- AC 512 Advanced Financial Reporting and Analysis or
- AC 523 Business Valuation and Performance Measurement 3
- AC 532 Advanced Governance, Risk Assessment, and Assurance or
- AC 534 Fraud and Ethics Risk Management 3
- AC 556 Governmental and Nonprofit Accounting 3
- AC 572/Law 647 Estate and Gift Taxation 1-3
- AC 573/Law 753 Advanced Income Tax 3
- AC 577/Law 641 Tax Practice and Procedure 1-3
- AC 581/Law 761 International Taxation 1-3
- AC 582/Law 650 State and Local Taxation 1-3
- AC 583/Law 732 Employee Benefits 1-3
- AC 584/Law 796 Tax-Exempt Organizations 1-3
- LGS 504 Legal Issues in Accounting 3
- Elective (approved by advisor) 3

**Total semester hours: 30**

Note: Two undergraduate tax courses (which may be a part of the undergraduate degree requirements) are required as prerequisites to each of the graduate tax courses. LAW & C&BA courses have additional fees.

http://graduate.ua.edu/catalog/17700.html
Admission to the Graduate School does not imply admission of a student to candidacy for a degree. Admission to candidacy is contingent upon the recommendation of the student's department and the approval of the graduate dean.

The application for Admission to Candidacy for the Master's Degree should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama. It must be approved by the time of registration for the semester in which requirements for the degree are completed.

Additional details on Admission to Candidacy and all other degree requirements is in the Degree Requirements section of this catalog.

**New Scholarships**

**BDO Seidman Accounting Scholarship.** Awarded annually to an accounting major. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487.

**Cook, J. Woodie and Ivy Sanders Endowed Scholarship.** First priority, full time accounting majors who are graduates of high schools in Choctaw Co., Alabama; 2nd priority to full-time accounting majors from small towns and non-metro areas in Alabama. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487.

**Diamond, Sam, Jr. Endowed Scholarship in Tax Accounting.** Awarded annually to a Master of Tax Accounting student. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487.

**Fowler, Anna Catherine Cook Endowed Scholarship.** Accounting major; First priority to first generation college students; 2nd priority to full-time student in C&BA with major other an accounting; preference to Choctaw, Sumter Co., AL or Lauderdale Co., MS. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487.

**Horton, Charles/Jamison Money Farmer & Company Scholarship in Accounting.** Awarded annually to an accounting major. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487.

**Jones, Sally R. and Laurens W. Endowed Scholarship.** Awarded annually to an accounting major. Contact: Director, Culverhouse School of Accountancy, Box 870220, Tuscaloosa, AL 35487.
The MA and MS degrees are specialized master's degrees designed to prepare students for professional positions in business, management, and related fields, and to serve as preparation for study toward a doctoral degree. The MA degree is offered in economics and management and the MS degree is offered in finance, marketing, operations management and applied statistics. Program missions and prerequisites vary by field and are described in the following sections pertaining to each curriculum.

**Admission Requirements**
Additional information is in the Admission Criteria section of this catalog and may be outlined in the individual program descriptions in this catalog.

**MA and MS Degree Requirements**
The master of arts and the master of science degree with a major field of specialization is granted upon the completion of at least 30 semester hours of graduate work in accordance with the requirements of the University of Alabama Graduate School under Plan II.

A maximum of 6 hours of 400-level coursework may be accepted for an MA or MS degree program, but only if a form for Approval of 400-Level Course Work for Master's Credit is approved by the Graduate School prior to the semester in which the 400-level coursework will be taken. The remaining courses must be selected from those numbered 500 or above.

Admission to the Graduate School does not imply admission of a student to candidacy for a degree. Admission to candidacy is contingent upon the recommendation of the student's department and the approval of the graduate dean.

The application for Admission to Candidacy for the Master's Degree should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama. It must be approved by the time of registration for the semester in which requirements for the degree are completed.

Additional information is in the Degree Requirements section of this catalog.
THE UNIVERSITY OF ALABAMA GRADUATE CATALOG

7.4.7 CURRICULUM IN FINANCE

The master's in finance program offers a specialized curriculum with focused training in finance. The course of study is designed to provide insight into the following topics: (1) the important role of financial intermediaries; (2) the management of financial intermediaries and an understanding of the markets in which they participate; (3) the valuation of financial assets such as stocks, bonds, derivatives, and other specialized assets, and how they are managed in a portfolio; (4) the determination and behavior of interest rates and rates of return on assets; and (5) the incentives and determinants of corporate behavior.

The master's in finance is designed to offer advanced applied and theoretical expertise in investments, banking, corporate finance, and/or financial engineering. The financial risk strategy track within this master's program addresses modern techniques for managing financial risk. Students selecting this track will have the opportunity to be trained in state-of-the-art techniques in valuing and using derivative securities, with a particular emphasis on mortgage-backed securities, structured notes, and computer-based solution design within an object-oriented framework.

Successful completion of the master's in finance provides students with knowledge useful for pursuing careers in investments, financial management, banking, and other financial services. With the appropriate choice of courses, students can apply to transfer many of their master's courses into the doctoral program in finance.

**Admission Requirements**
Students accepted into the program are not required to have obtained an undergraduate degree in business. Before commencing the program, however, the student is advised to have completed the equivalent of undergraduate courses in accounting, statistics, calculus, economics, and finance. Any deficiencies should be made up by taking courses during the summer before entering the master's program. See the Admission Criteria section of this catalog for more information.

**Degree Requirements**
The following courses are required for the master's degree in finance:

<table>
<thead>
<tr>
<th>Required courses</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EC 508 Microeconomic Theory</strong> or <strong>EC 509 Macroeconomic Theory and Policy</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>EC 610 Seminar in Microeconomic Theory</strong> or <strong>EC 611 Seminar in Macroeconomic Theory</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>EC 570 Mathematical Economics</strong> or <strong>EC 571 Econometrics</strong> or <strong>EC 513 Economic Forecasting and Analysis</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>FI 510 Financial Management</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>FI 512 Money and Capital Markets</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>FI 515 Quantitative Investment Analysis</strong></td>
<td>3</td>
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<tr>
<td><strong>FI 522 Bank Administration</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>FI 596 Capstone Project</strong></td>
<td>3</td>
</tr>
</tbody>
</table>

Total semester hours of common core courses: 24

Electives chosen with approval of advisor: 6

Total hours semester for the master's degree: 30

After 12 semester earned hours of graduate credit (including transfer) at The University of Alabama the student must apply for admission to candidacy. The application for Admission to Candidacy for the Master's Degree is on the Graduate School website. It must be approved by the time of registration for the semester in which requirements for the degree are completed.
Additional information on Admission to Candidacy and all other degree requirements is in the **Degree Requirements** section of this catalog.
7.4.8 CURRICULUM IN ECONOMICS

The MA program in economics is designed to prepare students for careers as professional economists in business, government agencies, colleges and universities.

Admission Requirements
Entering graduate students are expected to have completed undergraduate coursework in economics, statistics, and mathematics. Students must have completed the following undergraduate courses or their equivalents:

- EC 308 Intermediate Microeconomics
- EC 309 Intermediate Macroeconomics
- ST 260 Statistical Methods I
- MATH 121 Calculus and Applications or MATH 125 Calculus I

Any deficiencies should be made up by taking courses during the summer before entering the master's program. Additional information is in the Admission Criteria section of this catalog.

Degree Requirements
There are three tracks available for the MA degree in economics. Track I provides preparation for the PhD in economics, Track II is designed for students who wish to pursue careers applying economic analysis and Track III provides a strong foundation for students who have strong interests in public policy issues. Additional information is in the Degree Requirements section of this catalog.

Track I. The following are the requirements for the MA degree in economics to prepare for the PhD:

Required courses
- EC 570 Mathematical Economics 3
- EC 610 Seminar in Microeconomic Theory 3
- EC 611 Seminar in Macroeconomic Theory 3
- EC 616 Seminar in Monetary Economics 3
- EC 660 Game Theory 3
- EC 670 Econometrics 3
- EC 671 Seminar in Econometrics 3
- ST 554 Mathematical Statistics I 3

Total semester hours of required courses 24

Electives
Any two graduate-level economics courses at the 500 level. These can be selected from the following areas: applied microeconomic theory, monetary economics, or public economics.

Minimum total semester hours for Track I 30
**Track II.** The following are the requirements for the MA degree in applied economics:

**Required courses**

- EC 513 Economic Forecasting and Analysis 3
- EC 571 Econometrics 3
- EC 508 Microeconomic Theory 3
- EC 509 Macroeconomic Theory and Policy 3
- EC 570 Introduction to Mathematical Economics* 3
- ST 521 Statistical Data Management 3
- ST 522 Advanced Statistical Data Management 3
- ST 531 Data Mining I 3
- ST 532 Advanced Data Mining II 3

  Total semester hours of required courses 27

**Elective courses**

One additional course at the graduate level is needed to complete the total hours required for the MA degree, Track II. Students may select one course from the list below. Students who wish to avoid taking a comprehensive exam should choose EC 596. The purpose of this class is to provide students an opportunity to complete projects using economic analysis. This would provide a capstone experience for students in the program.

- EC 516 Monetary Theory and Policy
- EC 531 International Finance
- EC 550 Survey of Development of Economic Thought
- EC 597 Special Topics
- FI 510 Financial Management
- FI 512 Money and Capital Markets
- FI 514 Investments

  Total semester hours of elective courses 3

Other courses may be substituted as electives with permission of the graduate program committee. For Track II students, the EC 596 class will generally be offered in the spring, and as needed in the summer, to allow students to complete their program within one calendar year.

  Minimum total semester hours for Track II 30

*Students who have taken EC 470 or its equivalent (with a grade of "B" or above) will be allowed to waive this requirement. All students who have not taken this course are very strongly urged to take it in the summer prior to entry into the program in the fall semester.*
**Track III.** The following are the requirements for the MA degree in public policy economics:

**Required courses**
- EC 513 Economic Forecasting and Analysis 3
- EC 571 Econometrics 3
- EC 508 Microeconomic Theory 3
- EC 509 Macroeconomic Theory and Policy 3
- EC 570 Introduction to Mathematical Economics* 3

Total semester hours of required courses 15

**Electives**
Any four graduate-level economics courses at the 500 level. 12

**Additional course**
One additional course at the graduate level is needed to complete the total hours required for the MA degree, Track III. Students may select one course from the list below. Students who wish to avoid taking a comprehensive exam should choose EC 596. The purpose of this class is to provide students an opportunity to complete projects using economic analysis. This would provide a capstone experience for students in the program.

Minimum total semester hours for Track III 30

**REPRESENTATIVE 500-LEVEL ELECTIVE COURSES**
- EC 512 Industrial Organization
- EC 516 Monetary Theory and Policy
- EC 523 Public Finance
- EC 530 International Economics
- EC 531 International Finance

Other courses may be substituted as electives with permission of the graduate program committee.

*Students who have taken EC 470 or its equivalent (with a grade of "B" or above) will be allowed to waive this requirement. All students who have not taken this course are very strongly urged to take it in the summer prior to entry into the program in the fall semester.
7.4.9 CURRICULUM IN MANAGEMENT

The MA in management is a 30-credit-hour degree program offering two concentrations, General Management and Project Management. Information on admission to these concentrations is in the Admission Criteria section of this catalog.

**General Management.** The General Management concentration is designed as a part-time curriculum for lower- to mid-level managers. Its primary objective is to provide graduates with the increasingly specialized skills and knowledge required for effectively managing the human issues of organizations. The practicing managers who graduate from the program are trained to solve the growing array of problems that are faced by organizations as they strive to succeed in an increasingly competitive world. This program is structured to prepare students to be more effective managers of their human resources as they work in their current positions as well as into the future.

**Project Management.** The Project Management concentration is designed for either students possessing an undergraduate degree in business who may be interested in technical business and project management careers, or students possessing or completing degrees in technical, non-business disciplines, such as engineering, and who are interested in business and project management. The program provides intensive coursework in management, marketing, operations management, and engineering management.

The students who graduate from this program are trained to work in organizations that routinely engage in projects and require professional managers of these processes. Students are trained to be effective business managers for technically-oriented firms.

Each student who completes the master's program is expected to have a basic knowledge of the concepts, processes, and practices associated with the management of organizations. For someone with a non-business undergraduate degree and no work experience, this would include microeconomics, principles of accounting, production, management, and finance—or having a minor in business.

**Global Business Management.** The online Master of Arts in Management, with a concentration in Global Business Management, offers students the opportunity to develop the skills necessary to be successful in a global business environment. Students in this program will learn the complexities of managing businesses in a global arena, including the challenge of managing in a culturally diverse environment. Graduates of this program will understand the degree to which globalization has changed the way management is practiced in today's society. In addition, graduates will have a broad knowledge of subjects that are key to effective global management, including but not limited to; managerial economics, managerial finance, accounting for global management, economics for global management, international marketing, global leadership and ethics, managerial statistics, and global business.

This flexible, online program is designed for supervisors, administrators, coordinators, managers, military personnel, and others who seek to advance their awareness of the impact of global issues in the workplace or who have developed the need for more advanced management skills in their current positions. The program is designed for students who do not have substantial prior education in business. All courses are offered online. The program consists of 30 hours of coursework, which students can complete in 18-24 months. A thesis is not required. Details about program requirements are available on the Manderson Graduate School of Business website.

**Degree Requirements**

Students admitted to the MA program in management complete a minimum of 30 hours of approved coursework beyond the requirements for an undergraduate degree. For students in the General Management concentration, the normal course load is 6 hours per semester, while students in the Project Management concentration are typically full time students.
In addition to the course requirements, the candidate must successfully complete a final oral examination. This examination covers issues raised in a research paper completed by the student under the guidance of a faculty member. All students who complete a master's program are expected to have a basic understanding of the concepts, processes, and institutions associated with the management of business organizations. Additional information is in the Degree Requirements section of this catalog.

### CONCENTRATION IN GENERAL MANAGEMENT

**Required courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 510</td>
<td>Research Methods in Management</td>
<td>3</td>
</tr>
<tr>
<td>MGT 511</td>
<td>Employee Recruitment, Selection, and Placement</td>
<td>3</td>
</tr>
<tr>
<td>MGT 520</td>
<td>Change Management</td>
<td>3</td>
</tr>
<tr>
<td>MGT 527</td>
<td>Strategic Human Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>MGT 532</td>
<td>Employee Relations</td>
<td>3</td>
</tr>
<tr>
<td>MGT 542</td>
<td>Management Communication</td>
<td>3</td>
</tr>
<tr>
<td>MGT 597</td>
<td>Contemporary Issues in Performance Management</td>
<td>3</td>
</tr>
<tr>
<td>BER 540</td>
<td>Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td>MGT 598</td>
<td>Research in Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total semester hours of required courses**

27

**Elective**

Any graduate level course with consent of advisor

3

**Total semester hours**

30

### CONCENTRATION IN PROJECT MANAGEMENT

**Required courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 519</td>
<td>Marketing Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT 581</td>
<td>Project Management in Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MGT 520</td>
<td>Change Management</td>
<td>3</td>
</tr>
<tr>
<td>MGT 597</td>
<td>Contemporary Issues in Performance Management</td>
<td>3</td>
</tr>
<tr>
<td>OM 525</td>
<td>Effective Quality Management</td>
<td>3</td>
</tr>
<tr>
<td>CE 567</td>
<td>Construction Administration and Finance</td>
<td>3</td>
</tr>
<tr>
<td>MGT 582</td>
<td>New Venture Development</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total semester hours of required courses**

21

**Elective (Any three of the following):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 511</td>
<td>Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>MKT 522</td>
<td>Strategic Logistics Management</td>
<td>3</td>
</tr>
<tr>
<td>MGT 542</td>
<td>Strategic Communication</td>
<td>3</td>
</tr>
<tr>
<td>MGT 527</td>
<td>Strategic Human Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>OM 506</td>
<td>Spreadsheet Modeling</td>
<td>3</td>
</tr>
<tr>
<td>OM 516</td>
<td>Production Management</td>
<td>3</td>
</tr>
<tr>
<td>CE 568</td>
<td>Construction Management</td>
<td>3</td>
</tr>
<tr>
<td>IE 517</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>IE 518</td>
<td>Engineering Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Any graduate level course with consent of advisor

3

**Total semester hours**

30
7.4.10 CURRICULUM IN APPLIED STATISTICS

The program described below leads to the MS degree in applied statistics. It provides a broad yet thorough training in the methodology and theory of statistics, as well as an appreciation for the application of statistics in a variety of disciplines. For more detailed information and recommendations, students are encouraged to consult the *Applied Statistics Graduate Handbook*.

**Admission Requirements**
The candidate for admission to applied statistics is normally expected to have completed courses in mathematics equivalent to three semesters of undergraduate calculus and to have a working knowledge of computer programming and linear or matrix algebra. The Graduate Record Examination (GRE) or the Graduate Management Aptitude Test (GMAT) is required of all applicants. Additional information is in the *Admission Criteria* section of this catalog.

**Degree Requirements**
The MS degree in applied statistics requires 30 hours, 12 of which are electives. There are five tracks within this degree to allow different specializations. These tracks are traditional, quality and six sigma, data mining, actuarial science, and biostatistics. All of these tracks have 6 required courses and 4 elective courses with 6 common courses for all tracks. The requirements of these tracks are summarized below. The electives may be earned in additional coursework in statistics or related areas, with the approval of a faculty advisor. The program of related courses may vary from student to student, and depends on the student's interests and academic background. When most of the coursework is completed, the student must pass a written comprehensive examination. Additional information is in the *Degree Requirements* section of this catalog.

The following are required courses common to all tracks:

<table>
<thead>
<tr>
<th>Required courses</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST 552 Applied Regression Analysis</td>
<td></td>
</tr>
<tr>
<td>ST 553 Applied Multivariate Analysis</td>
<td></td>
</tr>
<tr>
<td>ST 554 Mathematical Statistics I</td>
<td></td>
</tr>
<tr>
<td>ST 555 Mathematical Statistics II</td>
<td></td>
</tr>
<tr>
<td>ST 560 Statistical Methods</td>
<td></td>
</tr>
<tr>
<td>ST 561 Applied Design of Experiments</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total semester hours of in-common required courses</th>
<th>18</th>
</tr>
</thead>
</table>

**Track I: Traditional.** The following are the requirements for the traditional specialization in applied statistics:

<table>
<thead>
<tr>
<th>Required courses</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST 535 Nonparametric Statistics</td>
<td></td>
</tr>
<tr>
<td>ST 575 Statistical Quality Control</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total semester hours of required courses for Track I</th>
<th>12</th>
</tr>
</thead>
</table>

**Track II: Quality and Six Sigma.** The following are the requirements for the quality and six sigma specialization:

<table>
<thead>
<tr>
<th>Required courses</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST 575 Statistical Quality Control</td>
<td></td>
</tr>
<tr>
<td>IE 521 Reliability, Maintainability, and Total Productive Maintenance</td>
<td></td>
</tr>
<tr>
<td>IE 622 Quality Engineering</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total semester hours of required courses for Track II</th>
<th>12</th>
</tr>
</thead>
</table>

**Track III: Data Mining.** The following are the requirements for the data mining specialization:
Required courses
ST 521 Statistical Data Management 3
ST 522 Advanced Data Management 3
ST 531 Knowledge Discovery and Data Mining I 3
ST 532 Data Mining II 3

Total semester hours of required courses for Track III 12

Track IV: Actuarial Science. The following are the requirements for the actuarial science specialization:

Required courses
ST 521 Statistical Data Management 3
ST 535 Nonparametric Statistics 3
FI 443 Property and Liability Insurance 3
FI 444 Life and Health Insurance 3

Total semester hours of required courses for Track IV 12

Track V: Biostatistics. The following are the requirements for the biostatistics specialization:

Required courses
ST 521 Statistical Data Management 3
ST 522 Advanced Data Management 3
CHS 520 Basic Epidemiology 3
CHS 625 Advanced Epidemiology 3

Total semester hours of required courses for Track V 12
7.4.11 CURRICULUM IN OPERATIONS MANAGEMENT

Operations management focuses on the analysis, design, and management of the operations that produce and deliver the goods and services. It applies structured, quantitative techniques to analyze and design business operations and to support effective business decision making. Operations management helps evaluate and select actions based on information, process analysis, and quantitative modeling. There are tremendous opportunities for the effective application of these tools, techniques, and methods in a wide range of business operations including service operations, manufacturing, distribution, transportation, logistics, supply chain management, revenue management, quality management, finance, human resources, information systems, marketing, and strategic planning. Operations management can be effectively applied to virtually every component of an organization. The OM master's degree program features two tracks—operations management and enterprise integration. See the Admission Criteria section of this catalog for more information.

Degree Requirements

**Track I:** Operations Management. Entering students should have strong quantitative skills and good written and oral communication skills. The program consists of 30 hours of coursework which students can complete in 18 to 24 months starting in the fall semester. All students are expected to complete the program within 24 months. No thesis is required. The track in operations management (OM) is designed to prepare students for the practice of operations management. The program is structured to provide instruction in materials management, scheduling and control, supply chain management, and quality control as well as topics in applied quantitative methods such as optimization, statistics, and simulation. The elective courses allow students to obtain additional instruction in other subjects such as project management, supply chain strategy, and quality management.

**Required courses**

Prerequisite: At least one semester of calculus equivalent to MATH 121 or higher.

- OM 500 Management Science and Spreadsheet Modeling 3
- OM 517 Supply Chain Modeling and Analysis 3
- OM 522 Operations Scheduling Problems 3
- OM 523 Inventory Management 3
- OM 524 Manufacturing Scheduling and Control Systems 3
- OM 540 Systems Simulation 3
- OM 592 Practicum in Operations Management 3
- ST 560 Statistical Methods I 3
- ST 575 Statistical Quality Control 3
- Electives (approved by the program coordinator) 3

**Total Semester hours** 30

More information is available at the Operations Management web site: www.cba.ua.edu/omms.

**Track II:** Enterprise Integration. The enterprise integration systems (EI) track is designed to prepare students to enable business process improvement through information technology-based solutions. The EI track provides a depth of knowledge in project management, workflow design and information systems delivery through a combination of classroom and project experiences. The program reinforces leading IS project and process management concepts through experiential learning.
Students will gain experience in leading teams that analyze, design, construct, and deploy cross-functional systems, and integrate business data and process improvements into existing business enterprises.

**Required courses**
- **MIS 516 Practicum** 3
- **MIS 525 Information Systems Project Management** 3
- **MIS 527 Emerging Information Technologies Seminar** 3
- **MIS 535 Information Systems Consulting** 3
- **MIS 560 Enterprise Integration Methods** 3
- **MIS 562 Enterprise Integration Development** 3
- **MIS 598 Research in Management Information Systems** 6
- **OM 500 Management Science and Spreadsheet Modeling** 3
- **ST 550 Statistical Methods** 3

**Total semester hours** 30

*Restricted Elective—EIS track advisor's prior approval is required.

More information is available at the Management Information Systems web site, as well as the Degree Requirements section of this catalog.
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7.4.12 CURRICULUM IN MARKETING

Marketing is the field of business concerned with (a) the identification and analysis of consumer and business market needs and (b) the development and management of marketing programs to satisfy those needs. Marketers are responsible for product development and management, promotional programs, distribution systems, and pricing for targeted market opportunities. The Master of Science in Marketing (MSM) degree program is based on an intensive 30-hour curriculum designed to provide students with advanced analytical skills and hands-on experience to prepare them for fast-track jobs in such fields as:

- product or brand management
- marketing research
- supply chain management
- professional selling
- services marketing
- public service
- purchasing
- retail management

Admission Requirements
Students accepted into the Master of Science in Marketing degree program must have strong academic and professional potential as evidenced by Grade Point Average (GPA), scores on the Graduate Management Aptitude Test (GMAT) or Graduate Record Examination (GRE), information in letters of recommendation, and professional or analytical experience. GPA of 3.00 and GMAT score of 550 (GRE of 1100) are minimum requirements for admission to the program. Additional information is in the Admission Criteria section of this catalog.

Typical applicants will be:

- seniors in all business majors
- seniors with non-business majors
- persons with non-business graduate degrees seeking employment in marketing
- individuals currently working in the private or public sector

Prior study of business is not required. Students with liberal arts, engineering, science, communications, as well as business undergraduate backgrounds are encouraged to consider this program.

Students completing the MSM program will

- earn a graduate business degree (Master of Science)
- enhance their employment opportunities and upward mobility through a program of advanced marketing coursework and hands-on project experience
- The program is also appropriate for persons who wish to earn a master's degree en route to a Ph.D. in marketing.

Degree Requirements
Coursework in the Master of Science degree program in marketing is designed to provide students with:

- a solid understanding of contemporary marketing issues
- experience in advanced analytical and marketing research techniques necessary for sound marketing decisions.

The MSM program requires 30 hours of coursework, with the expectation that the degree will be completed in two semesters. Entrance is limited to the fall semester.

The first semester (fall) coursework involves an in-depth immersion into marketing issues and decision-making, marketing strategy, marketing research tools, statistics, and an introduction to project management.
The second semester (spring) coursework involves application of the research and project management tools to complete a specific team-based comprehensive marketing research/strategy project for a company or other organization. Clients for the team-based marketing projects and internships have included Fortune 500 companies, national and regional firms, local businesses, public sector organizations, and start-ups. Other courses are graduate electives, selected by the student from a set of options based on his or her areas of interest.

Up to six hours of internship allow students in the MSM program to gain valuable marketing project or employment experience.

**Fall semester course schedule**
- MKT 518 Survey of Marketing 3
- ST 550 Introduction to Statistics 3
- MKT 530 Advanced Marketing Analysis 3
- MKT 592 Marketing Internship or Specialization Elective 3
- Specialization Elective 3

**Spring semester course schedule**
- MKT 581 Marketing Project Management 3
- MKT 592 Marketing Internship or Specialization Elective 3
- Specialization Elective 3

**Two classes from the following:**
- MKT 531 Services Marketing 3
- MKT 510 New Product Development 3
- MKT 522 Logistics Strategy 3

**Total semester hours** 30

Additional information is in the [Degree Requirements](http://graduate.ua.edu/catalog/18400.html) section of this catalog.

**Faculty**
The marketing faculty at The University of Alabama is nationally recognized for high quality teaching, research, and service to the state and nation. Faculty members work closely with students as teachers, project and team mentors, and as resources for placement and career planning after as well as before graduation.

**Placement**
Placement of students is a priority. We have recent graduates in nearly every conceivable marketing position around the world. Graduates have careers in brand management for consumer product firms, in banking, in industrial and pharmaceutical marketing and sales, in automobile manufacturing, in marketing research, in supply chain management, in sports and entertainment marketing, in entrepreneurship, in the public sector, in marketing of non-profit organizations, and in academics.
**DOCTORAL PROGRAMS IN BUSINESS**

The doctor of philosophy degree is awarded for scholarly attainment and represents the highest degree in business administration that the University may bestow upon a student. Doctoral programs in business are designed principally for those who wish to prepare for careers in university teaching or for research positions in business and government.

The faculty of the Manderson Graduate School of Business offer the PhD degree in seven business fields: accounting, applied statistics, economics, finance, management, operations management, and marketing. The doctoral program in operations management offers an interdisciplinary concentration in management information systems.

**Dual degree programs in Law and Economics.** The University of Alabama School of Law and the Department of Economics, Finance, and Legal Studies offer the opportunity to obtain the dual juris doctor (JD)/doctor in philosophy (PhD) degree in the field of economics. In order to be accepted in the JD/PhD program, a student must apply for admission to, and be accepted into, the PhD program in economics and the JD. For additional information about these doctoral programs and access to specific program policies and guidelines visit [Culverhouse College of Commerce and Business Administration](http://graduate.ua.edu/catalog/18500.html) web site.

Doctoral programs in business are built upon the premise that a student should possess an extensive, in-depth knowledge of one major field of study and one supporting or minor field of study, as well as knowledge of statistical and quantitative methods of analysis necessary to conduct research and contribute to the advancement of knowledge in business. Special emphasis is placed on the fact that the degree is not granted as a result of the student's having taken a given number of courses or having earned a given number of credit hours.

These factors, while obviously important, will vary for different students: consequently, there is no total number of courses or hours that satisfies degree requirements uniformly for all students. Instead, the requirements should be thought of primarily from the standpoint of the student's ability to satisfy the graduate faculty that he or she has a thorough grasp of the fields selected. In all cases, however, students must meet the minimum requirements stipulated by the Graduate School and by the Manderson Graduate School of Business.

In addition to the course requirements, each student must show evidence of research competence by writing a dissertation and must satisfy the language/research tool requirement of his or her major field. The dissertation, as the culmination of each student's scholarly efforts, should be a significant contribution to the field of knowledge in business.

**7.5.1 Admission to PhD Degree Programs**

Admission to doctoral programs in business is open to qualified individuals who hold undergraduate and/or graduate degrees from accredited colleges and universities. Individuals seeking admission to a doctoral program should follow the application procedure established by the Graduate School of The University of Alabama. Applications for admission are carefully evaluated by selected members of the graduate faculty of the specific field to which the student is seeking admission. Additional information is in the [Admission Criteria](http://graduate.ua.edu/catalog/18500.html) section of this catalog.

**7.5.2 Degree Requirements**

**Student program committee.** For registration for the first semester or summer session in residence, each student will be advised by the graduate coordinator or department head of the major field. The graduate coordinator guides the student in course selection and counsels the student regarding other aspects of the program.
Plan of Study. The PhD Plan of Study is available at the Graduate School website. All doctoral students must have a completed Plan of Study approved by the Graduate School no later than the semester during which the student will complete 30 semester hours of UA and/or transfer credit toward the doctoral degree. Otherwise, a “hold” may be placed on future registrations. An amended Plan of Study (if needed) must be submitted to the Graduate School when the student submits the form for Admission to Candidacy for Doctoral Degree.

Scholastic requirements. If a student's cumulative grade average falls below "B," or if the student earns a "D" or "F" in a graduate course, the student may be dismissed from the program.

Residency requirements. The minimum period (following the bachelor’s degree) for earning the PhD will vary dependent on the discipline. The program is full-time and a student is expected to maintain continuous residence at The University of Alabama. Additional information on doctoral residency is in the Doctoral Degrees section of this catalog.

Major field requirements. The student must choose a major field from one of the following programs: accountancy, applied statistics, economics, finance, management, marketing, or operations management. The major field may include cognate courses offered by divisions of the University outside or within the Manderson Graduate School of Business. The student must take at least seven graduate-level courses in the major field to prepare for the comprehensive examination.

Minor field requirements. One minor field of study must be selected from within the Manderson Graduate School of Business or in a discipline outside the School that is closely related to the student's major field of study. To satisfy the minor-field requirement, the student must meet the standards set by the program area granting the minor. In general, this means that the student must demonstrate a thorough grasp of the philosophy, methodology, and literature dealing with the minor field. The student must take a minimum of four graduate courses to satisfy the minor-field requirement. Some minor fields require a written comprehensive examination. For applied statistics, the minor-field requirement is replaced by the interdisciplinary field courses.

Quantitative methods requirements. Each student is required to complete two courses in statistical methods equivalent to the content of ST 550 and ST 551, and two additional courses involving more advanced quantitative and/or statistical methods. These two elective courses are in addition to courses selected to satisfy the major or minor field requirements. A student who selects statistics as the major or minor field may satisfy the quantitative-methods requirement by completing at least four courses involving quantitative methods in addition to those selected to satisfy the minor field requirements in statistics.

Language/research tool requirements. There is no University-wide or College-wide language/research tool requirement for the PhD degree. Each program offering the degree may set its own requirements. In cases where the program has established a language/research tool requirement, candidates must complete the language/research tool requirement before taking the preliminary examination. Each student should contact the doctoral program coordinator in his or her major field for more information concerning language/research tool requirements.

Comprehensive and preliminary examinations. Each student is required to pass a comprehensive examination in the major field, and, if required, a comprehensive examination in the minor field(s). The examinations primarily aim to determine the student's ability to show relationships among the various segments of knowledge within the major and minor fields of study. The written examination in the major field is scheduled for each student by the department head or program director. Examinations in the minor field (if required) may be taken at any time scheduled by the respective programs.

Some disciplines may also require a preliminary or qualifying examination in which the student must demonstrate competency in the major field in order to continue in the program.
Such examinations will normally be administered after the first year in the program and will be scheduled by the department head or program coordinator.

In accordance with University policy, a student may attempt each examination no more than two times. However, each student should consult his or her program's policies for the written comprehensive examination because programs may vary in approach and requirements.

**Dissertation committee.** The dissertation committee is appointed by the department head or the graduate coordinator in the student's major field, in consultation with the faculty and the student. The dean of the Graduate School must approve the committee upon submission of the form for Appointment/Change of Doctoral Dissertation Committee. The committee consists of a minimum of five members of the graduate faculty; no fewer than two members must be from outside the student's major field and at least one member must be from outside the student's academic department. Each member of the committee must possess a terminal degree. Exceptions must be approved by the dean of the Culverhouse College of Commerce and Business Administration and by the dean of the Graduate School. The director of the dissertation is the chairperson of the committee.

Program areas may impose additional procedures for approval of dissertation proposals. The dissertation committee is responsible for admission of the student to candidacy, supervision of the dissertation, and administration of the final oral examination.

**Admission to candidacy.** Students are certified by the dean of the Graduate School for Admission to Candidacy for the PhD degree after they have met the following requirements:

1. Completed the program of approved coursework
2. Demonstrated in comprehensive examinations their competence in (a) the major field and (b) each minor field requiring an examination
3. Satisfactorily fulfilled the language/research tool requirement, if any
4. Passed the preliminary examination, if required
5. Established an approved dissertation committee
6. Received approval of the dissertation proposal from the dissertation committee

**Dissertation requirements.** A dissertation showing power of independent research and literary skill must be prepared on a topic in the major field. The subject of the dissertation must be approved by the student's dissertation committee. A student who completes the coursework but fails to complete the dissertation within five years after being admitted to candidacy will be required to retake the written examinations and the preliminary oral examination. All candidates are expected to register for dissertation supervision each semester and summer session until the dissertation is completed.

**Final oral examination.** When the dissertation has been completed the candidate will be given a final oral examination by the committee. This examination is primarily concerned with the research work of the candidate as embodied in the dissertation and the field in which the dissertation lies, but it may extend over the whole primary field of study. The final oral examination is governed by the rules of the Graduate School of The University of Alabama. All faculty members of the Manderson Graduate School of Business are invited to attend final oral examinations. The candidate will present a copy of the final draft of the dissertation to each committee member at least two weeks in advance of the final oral examination.

**Time limit for completion of the PhD.** A student entering the PhD program must complete all requirements for the PhD degree within seven years of the date of admission in the graduate program. If a student is suspended from the PhD program for exceeding the time limits for completion of the program, the individual may petition the department chair and the Culverhouse College of Commerce and Business Administration's PhD Programs Committee.

Extension of time and/or additional requirements for readmission to the program must be recommended to the Graduate School of The University of Alabama by the student's departmental graduate faculty and the dean of the college. A maximum one-semester extension may be granted in those rare instances in which the student presents documentation of compelling circumstances beyond the student's control that made it
impossible to complete the degree within 21 semesters after admission. See Time Limits Extension Request (Doctoral Only) for the steps in the University's policy and conditions needed for the dean of the UA Graduate School to consider a one-semester extension.

Additional information on the doctoral time limit and all other requirements is in the Degree Requirements section of this catalog.
The courses below are offered by the Manderson Graduate School of Business. Courses offered by other divisions of the University that business students are either required to take or permitted to elect are listed under the appropriate department in this catalog or in the undergraduate catalog. Prerequisites for any course may be waived if the student has equivalent knowledge or if the student passes an examination on the required prerequisites.

**AC 501 Basic Accounting for Managerial and Financial Control.** Three hours.  
Prerequisite: Admission to the EMBA program.  
Study of the fundamentals of financial accounting. Attention is given to the interpretation and uses of information contained in financial statements.

**AC 502 Accounting for Management Decisions.** Three hours.  
Prerequisites: AC 501 and admission to the EMBA program.  
Study of the fundamentals of managerial accounting. Attention is given to the use of accounting by business managers.

**AC 506 Concepts of Financial and Managerial Accounting.** Three hours.  
Prerequisite: Admission to the MBA program.  
Basic accounting concepts and procedures with an emphasis on the use of accounting information by business managers.

**AC 510 Principles of Systems Development.** Three hours.  
Prerequisites: AC 389 and admission into the MMA program.  
Systems analysis and design methods across the development cycle: planning, analysis, design, creation, implementation, operation and maintenance. Particular attention is given to roles of accountant/auditor.

**AC 512 Advanced Financial Reporting and Analysis.** Three hours.  
Prerequisite: AC 311 or equivalent.  
Advanced topics in financial accounting and reporting considered from a practical and theoretical perspective.

**AC 516 Risk Analysis and Control.** Three hours.  
Prerequisite: AC 506 or equivalent.  
Identification of the risk profile of a business, including operational, financial, technological, and behavioral risks. Development and implementation of risk management policies and procedures used to detect and prevent business risk problems.

**AC 522 Contemporary Accounting Issues.** Three hours. May be repeated for up to six hours credit.  
Prerequisite: Permission of the instructor.  
Examination of topics of current relevance to accounting theory and practice.

**AC 523 Business Valuation and Performance Measurement.** Three hours.  
Prerequisite: AC 506 or equivalent.  
The analysis of accounting information for purposes of valuing businesses for investment, credit, and related decisions.

**AC 532 Advanced Governance, Risk Assessment, and Assurance.** Three hours.  
Prerequisite: AC 432 or AC 516 or equivalent.  
Advanced study of standards, concepts, procedures, and professional ethics underlying governance and the provision of assurance services.

**AC 534 Fraud and Ethics Risk Management.** Three hours.
Prerequisite: AC 432 or AC 516 or equivalent.
Advanced study of the forensic accounting profession, fraud prevention, detection, and investigation, and the character needed to manage ethical challenges.

**AC 541 International Accounting.** Three hours.  
Prerequisite: AC 311 or equivalent.  
Accounting and financial reporting issues associated with global business operations.

**AC 554 Professional Certification.** Three hours.  
Examination of accounting standards and procedures required for professional accounting certification.

**AC 556 Governmental and Nonprofit Accounting.** Three hours.  
Prerequisite: AC 310 or equivalent.  
Special features of budgetary and fund accounting as applied to municipalities, other governmental units, and institutions such as schools and hospitals.

**AC 561 Accounting for Business Management.** Three hours.  
Concepts and procedures employed in developing and using accounting information for management decisions.

**AC 571 Taxation of Business Organizations.** Three hours.  
Prerequisite: AC 471 or permission of the instructor.  
A study of advanced tax topics with an emphasis on problem analysis, research, and preparation of proposed solutions.

**AC 572/Law 647 Estate and Gift Taxation.** One to three hours.  
Prerequisite: Admission to MTA program or permission of the instructor.  
Introduction to principles and practices associated with the taxation of estates and gifts.

**AC 573 Individual Tax Planning.** Three hours.  
Prerequisite: Admission to MTA program or permission of the instructor.  
A study of tax planning for individual taxpayers, including the interplay of income, estate, and gift taxes; and the taxation of partnerships, estates, and trusts.

**AC 574 Special Topics in Taxation.** Three hours.  
Prerequisite: Admission to MTA program or permission of the instructor.  
A study of special tax topics, including taxation of natural resources and international taxation.

**AC 575 Taxation of Corporations and Shareholders.** Three hours.  
Prerequisite: Admission to MTA program or permission of the instructor.  
A study of federal income tax problems of corporations and the relationships of these problems to the tax problems of the corporate shareholder.

**AC 576 Advanced Corporate Taxation.** Three hours.  
Prerequisite: Admission to MTA program or permission of the instructor.  
A study of the tax accounting problems relating to corporate organizations, commonly controlled corporations, and consolidated tax returns.

**AC 577 Law 641 Tax Practice and Procedure.** One to three hours.  
Prerequisite: Admission to MTA program or permission of the instructor.  
A study of organization, policies, and procedures of federal and state taxing authorities, including consideration of problems of organizations generally exempt from tax.

**AC 578 Partnership Taxation.** Three hours.  
Prerequisite: Admission to MTA program or permission of the instructor. Designed to explore, in depth, the taxation of the formation, operation, and disposition of partnerships and LLCs. In addition, a brief review of the taxation of S corporations is presented.

**AC 581/Law 761 International Taxation.** One to three hours.
Prerequisite: Admission to MTA program or permission of the instructor.
Introduction to the principles and practices associated with the taxation of international businesses.

**AC 582/Law 650 State and Local Taxation.** One to three hours.  
Prerequisite: Admission to MTA program or permission of the instructor.  
Introduction to state and local taxation of businesses.

**AC 583/Law 732 Employee Benefits.** One to three hours.  
Prerequisite: Admission to MTA program or permission of the instructor.  
Introduction to employee benefits particularly retirement and health benefits.

**AC 589 Accounting Information Systems.** Three hours.  
Prerequisite: AC 389 or its equivalent and admission to the MMA program.  
Examination of information systems development and control issues from the perspective of ensuring relevance, reliability, and security of business systems and information.

**AC 591 Independent Study in Accounting.** Three hours.

**AC 592 Accounting Internship.** Three hours.

**AC 593 Research and Communication in Taxation.** Three hours.  
Prerequisite: Admission to the MTA program or permission of the instructor.  
A study of tax research procedures, documentation of research, and presentation of research findings.

**AC 595 Accounting Research and Communication.** Three hours.  
Individual study of specific accounting topics and written and oral communication of the results of the study.

**AC 597 Special Topics in Accounting.** Variable credit.

**AC 610 Introduction to Accounting Research Methods.** Three hours.  
Prerequisite: PhD student.  
Study of the production of accounting research, with specific focus on the scientific method.  
Intensive focus on problem identification and communication, and theory and hypothesis development.

**AC 620 Advanced Accounting Research Methods.** Three hours.  
Prerequisite: PhD student.  
Study of advanced research methods with intensive focus on design and method development, data analysis, and interpretation of results.

**AC 630 Archival Accounting Research.** Three hours.  
Prerequisite: PhD student.  
Study of the archival accounting research literature.

**AC 640 Experimental Accounting Research.** Three hours.  
Prerequisite: PhD student.  
Study of the experimental accounting research literature.

**AC 650 Directed Research.** Three hours.  
Prerequisite: PhD student.  
Examination of the literature and methodology associated with a specific research topic.  
Directed focus on development of second-year paper.

**AC 691 Research Practicum I.** Three hours.  
Prerequisite: PhD student.  
Development of a first year project under the supervision of a faculty member. Resulting papers are presented at a departmental research workshop.
AC 692 Research Practicum II. Three hours.
Prerequisite: PhD student.
Development of a second-year research project under the supervision of a faculty member. Resulting papers are presented at a departmental research workshop.

AC 698 Research Colloquium Series. One hour.
Prerequisite: PhD student.
Participation in a research colloquium series involving scholars from top academic institutions.

AC 699 Dissertation Research in Accounting. Variable credit (three to nine hours).
Intermediate macro- and microeconomic theory (EC 309 and EC 308 or their equivalents) are considered prerequisites for all graduate coursework in economics, except for MBA-designated courses.

**EC 500 Managerial Economics.** Three hours.
Prerequisite: Admission to the MBA program.
An introduction to the foundations of both micro- and macroeconomic analysis, including consumer demand, production and cost analysis, price determination, and macroeconomic theory and policy. Emphasis is on the theory of the firm.

**EC 503 Economics of the Firm.** Three hours.
Prerequisite: Admission to the MBA program.
An introduction to the foundations of economic analysis as it applies to consumer and firm behavior. Emphasis is on market structures and pricing decisions.

**EC 508 Microeconomic Theory.** Three hours.
Prerequisites: EC 308 or equivalent and MATH 125 or equivalent.
An examination of the theory of resource allocation. Topics include demand theory, production and cost functions, theory of markets, general equilibrium analysis, and welfare theory.

**EC 509 Macroeconomic Theory and Policy.** Three hours.
Prerequisite: EC 508, EC 308, or permission of the instructor.
This overview of modern macroeconomic theory and its implications for the conduct of stabilization policies is intended to provide a solid background in macroeconomics for students not seeking a terminal degree in economics or for students preparing for EC 511. The course considers the microeconomic foundations of aggregate economic analysis, but with less mathematical rigor than in EC 511.

**EC 510 Advanced Microeconomic Theory.** Three hours.
A thorough examination of advanced value theory and a brief survey of distribution theory.

**EC 511 Advanced Macroeconomic Theory.** Three hours.
Modern theory of aggregate income and employment, with application to analysis of stabilization policies.

**EC 512 Industrial Organization and Public Policy.** Three hours.
Prerequisite: EC 508 or equivalent.
The theoretical and empirical study of large industrial firms in a market economy. The focus is on corporate and governmental policies affecting markets.

**EC 513 Macroeconomic Policy.** Three hours.
A survey of the analytical techniques used by economists to forecast the macro- and micro-levels of economic activity and the effects of public policy on the economy. Computing proficiency is required for a passing grade in this course.

**EC 516 Monetary Theory and Policy.** Three hours. (same as FI 516).
Prerequisites: EC 508 and EC 509 or equivalents.
Theoretical and empirical analysis of the money supply process, the demand for money, the impact of money on the economy, and the implementation of monetary policy.

**EC 523 Public Finance.** Three hours.
Prerequisites: EC 508 and EC 470. Study of the principles of taxation, government expenditures, borrowing, and fiscal administration.

**EC 530 International Economics.** Three hours.
Prerequisite: EC 430 or equivalent.
Analysis and policy implications relating to the international movement of goods, resources, and financial assets.

EC 531 International Finance. Three hours. (same as FI 531).
Prerequisite: EC 430 or equivalent.
An examination of the foreign exchange market, exchange rate determination, international financial institutions, and the management of the risks associated with international business.

EC 540 The Theory of Economic Development. Three hours.
A comprehensive study of classical and modern theories of economic progress. Particular emphasis is given to the less developed countries and to the role of institutions.

EC 550 Survey of Development of Economic Thought. Three hours.
A study in the development of economic ideas, from the classical writers down to the present.

EC 570 Mathematical Economics. Three hours. (same as FI 570).
Prerequisite: EC 470 or equivalent.
An introduction to mathematical tools commonly used in advanced economic theory and econometrics.

EC 571 Econometrics. Three hours.
Prerequisite: EC 570 or equivalent.
Corequisite: ST 551 or equivalent.
A quantitative analysis of actual economic phenomena based on the current development of theory and observation, related by appropriate methods of inference.

EC 591 Independent Study. Variable credit.

EC 596 Capstone Project. Variable credit.

EC 597 Special Topics in Economics. Variable credit.

EC 598 Introduction to Economic Research. Variable credit.

EC 599 MA Thesis Supervision. Variable credit.

EC 610 Seminar in Microeconomic Theory. Three hours.
Prerequisite: Graduate student status and permission of the instructor.
An advanced study of the modern theory of value and price. The seminar includes demand and supply analysis, marginal analysis, and the monopolistic and competitive structure of markets.

EC 611 Seminar in Macroeconomic Theory. Three hours.
Prerequisite: Graduate student status and permission of the instructor.
Selected topics in contemporary macroeconomic theory, with emphasis on dynamic analysis of cyclical fluctuations, stabilization policies, and growth.

EC 612 Seminar in Industrial Organization. Three hours.
Prerequisite: EC 512 or equivalent.
A survey of selected topics in industrial organization. Both theoretical and applied topics are examined, with special emphasis on recent developments.

EC 615 Distribution Theory. Three hours.
Prerequisite: Graduate standing.
Analysis of welfare economics as applied to income and wealth distributions. Methods of measuring and evaluating poverty, inequality, growth, income mobility, and redistributive policies.

EC 616 Seminar in Monetary Economics. Three hours. (same as FI 616).
Prerequisite: EC 516 or equivalent.
Selected topics in contemporary monetary theory, with emphasis on determination of the value of money and the effectiveness of monetary policies.

**EC 622 Seminar in Public Finance.** Three hours.
A seminar on recent developments in public economics, with emphasis on the theory of taxation including tax incentives and tax incidence.

**EC 623 Public Expenditure and Policy Analysis.** Three hours.
Prerequisite: EC 510 or equivalent.
A survey of the public-economics literature, with emphasis on the theory of public goods, public choice, and income distribution policies.

**EC 630 International Trade Theory.** Three hours.
Prerequisite: EC 610 or permission of the instructor.
A survey of selected topics in international trade with emphasis on the basis for trade and the welfare effects of trade policy.

**EC 631 Seminar in International Finance.** Three hours. (same as FI 631).
Prerequisite: EC 531 or equivalent.
A survey of the most important professional literature dealing with international financial management.

**EC 640 Theory of Risk and Insurance.** Three hours. (same as FI 640).
Prerequisite: Graduate standing.
Foundation of insurance in risk theory and its problems and practices.

**EC 641 Seminar in the International Economics of Development.** Three hours.
Prerequisite: EC 430, EC 440, or equivalent.
Consideration of advanced literature in international economics, with emphasis on those issues that relate to less developed countries: trade, multinational enterprise, and external debt problems.

**EC 650 Seminar in Economic Thought.** Three hours.
Prerequisite: EC 550 or equivalent.
An examination of the literature on economic analysis and policy. The course aims at establishing a synthesis of evolving doctrines that have become, and are formulating, the basis of accepted economic theory and policy.

**EC 653 Comparative Economic Systems.** Three hours.
A comparative analysis of market and non-market theoretical economic systems from the viewpoint of economic welfare.

**EC 660 Game Theory.** Three hours.
Prerequisites: EC 610 and EC 470.
An introduction to non-cooperative game theory. Emphasis on applications in microeconomics and macroeconomics.

**EC 670 Econometrics.** Three hours.
Prerequisites: EC 570, ST 551.
Introduction to methods of analyzing economic data. Topics include linear and non-linear least squares, maximum likelihood estimation, statistical inference, and methods for handling data problems.

**EC 671 Seminar in Econometrics.** Three hours.
Prerequisite: EC 571 or equivalent.
A study of selected topics and problems in econometrics emphasizing methodology for economic research measurements.

**EC 672 Financial Econometric Modeling.** Three hours.
Prerequisite: EC 571, EC 670 or ST 570.
The application of econometric time-series methods to financial data. GARCH, nonlinear and cointegration models will be emphasized.

**EC 676 Advanced Monetary Theory & Policy.** Three hours.
Prerequisite: EC 611 or EC 616.
Geared toward developing skills to conduct research in the areas of monetary theory and policy analysis. Builds on advanced topics that were introduced in EC 616. By the end of the semester, each student should have completed the initial stages of developing a potential dissertation chapter.

**EC 698 Research in Economics.** Three hours.
These courses consist of supervised study and investigation of specific problems in economics. They are open only to graduate students nearing completion of coursework for the degree.

**EC 699 Dissertation Research.** Variable credit. Three-hour minimum.
EC 110 and EC 111 or their equivalents are prerequisites for all graduate coursework in finance, except for MBA-designated courses.

**FI 504 Financial Management.** Variable hours.  
Prerequisite: Admission to the MBA program.  
Corporate financial planning and decision making; working capital management, capital budgeting, financing, risk-return analysis, valuation, and dividend policy.

**FI 505 Corporate Valuation.** Three hours.  
Prerequisite: FI 504 or equivalent.  
A case study course that focuses on the valuation of publicly held firms.

**FI 506 Mergers and Acquisitions.** Three hours.  
Prerequisite: FI 504, FI 510, or equivalent.  
An examination of corporate acquisitions, including firm valuation, bidding contests, and defense managers, as well as the corporate tax and legal environment.

**FI 510 Financial Management.** Three hours.  
Prerequisite: FI 302 or permission of the instructor.  
A course concerned with the management of corporate capital. Emphasis is on analysis of problems.

**FI 512 Money and Capital Markets.** Three hours.  
A detailed analysis of the role of money and capital markets in the financial process and of the influence outside forces have on these markets.

**FI 514 Investments.** Three hours.  
Prerequisites: FI 301 and FI 302 or equivalents.  
An overview of the investment decision process. Areas covered are financial statement analysis, risk measures, stock-price valuation models, and portfolio management.

**FI 515 Quantitative Investment Analysis.** Three hours.  
Prerequisite: FI 514 or permission of the graduate advisor.  
Acquaints the student with the quantitative approaches used in modern portfolio theory and investment analysis.

**FI 516 Monetary Theory and Policy.** Three hours. (same as EC 516)  
Prerequisites: EC 510 and EC 511 or equivalents.  
Theoretical and empirical analysis of the money supply process, the demand for money, the impact of money on the economy, and the implementation of monetary policy.

**FI 519 Financial Derivatives.** Three hours.  
Prerequisite: FI 514 or equivalent.  
Advanced quantitative analysis designed to improve managing financial risks such as adverse stock price movements, adverse interest rate changes, and adverse commodity price changes, with specific attention given to employing futures, options, and swap contracts.

**FI 520 Advanced Financial Derivatives.** Three hours.  
Prerequisite: FI 519.  
Advanced methodologies of valuing and managing financial derivative contracts are introduced, including numerical integration, lattice approaches, and simulation. A particular emphasis is given to implementing these methodologies as computer programs.
**FI 522 Bank Administration.** Three hours.
Prerequisites: FI 301 and FI 302.
A case course examining various aspects of managing a commercial bank in a dynamic environment.

**FI 524 Financial Markets and Institutions.** Three hours.
Prerequisite: Admission to the MBA program.
An analysis of the role of financial markets (especially equity markets) and financial institutions in the economy.

**FI 531 International Finance.** Three hours. (same as EC 531)
Prerequisite: EC 430 or equivalent.
An examination of the foreign exchange market, exchange rate determination, international financial institutions, and the management of the risks associated with international business.

**FI 534 Seminar in Real Estate.** Three hours.
Prerequisite: Graduate standing.
A survey of the major topics and issues in real estate, including real estate investment, alternative financing arrangements, law and agency theory, appraisal, market analysis, taxation, and brokerage.

**FI 535 Real Estate Investment and Development.** Three hours.
Prerequisite: FI 534 or equivalent.
A study of the concepts and principles of real property valuation and the analysis of real estate investments.

**FI 591 Independent Study.** Variable credit.

**FI 596 Capstone Project.** Variable credit.

**FI 597 Special Topics in Finance.** Variable credit.

**FI 598 Research.** Variable credit.

**FI 599 Thesis Research.** Three hours.

**FI 600 Research Methods for Finance.** Three hours.
Prerequisite: FI 470 or EC 471.
Emphasis on the different approaches and techniques used by financial researchers. Hands-on experience with data analysis is required.

**FI 601 Finance Theory I.** Three hours.
Prerequisite: FI 510.
Advanced practices of financial management and their application to decision making in the business firm.

**FI 602 Advanced Finance Theory II.** Three hours.
Prerequisite: FI 511.
An extension of the content of previous courses to summarize modern developments in financial theory.

**FI 610 Seminar in Financial Management.** Three hours.
Advanced management theory and techniques in the finance area. Emphasis is on current publications in the academic finance literature.

**FI 614 Seminar in Investments.** Three hours.
Provides an understanding of theoretical and functional aspects of professional investment management theory.

**FI 616 Seminar in Monetary Economics** Three hours. (same as EC 616)
Prerequisite: FI 516 or equivalent.
Selected topics in contemporary monetary theory, with emphasis on determination of the value of money and the effectiveness of monetary policies.

**FI 620 Market Microstructure Theory.** Three hours.  
Prerequisite: EC 610 or permission of the instructor.  
This course provides exposure to the major theoretical models that examine how the structure of markets affects price formation, information transmission, and operational efficiency.

**FI 622 Seminar in Public Finance.** Three hours. (same as EC 622)  
Prerequisite: EC 581 or equivalent.  
A seminar on recent developments in public economics, with emphasis on the theory of taxation including tax incentives and tax incidence.

**FI 624 Seminar in Financial Markets.** Three hours.  
This seminar provides for a deep understanding of the monetary and financial system, required of finance specialists in corporate finance, banking, and investments.

**FI 631 Seminar in International Finance.** Three hours. (same as EC 631)  
Prerequisite: FI 531 or equivalent.  
A survey of the most important professional literature dealing with international financial management.

**FI 633 Principles of Land Utilization.** Three hours.  
A study of factors affecting land use, land use patterns, and the development and measurement of land values, and of problems related to the optimization of land values and the maintenance of the highest and best use of land.

**FI 634 Land Utilization Policy.** Three hours.  
A study of the impact on the use of land and the control of the use of land of private investment activity and public activities, including monetary management, fiscal policy, federal aid to highways, FHA, VA, urban renewal, and public housing programs.

**FI 640 Theory of Risk and Insurance.** Three hours. (same as EC 640)  
Prerequisite: Graduate standing.  
The foundation of insurance in risk theory and its problems and practices.

**FI 641 The Social and Economic Functions of Insurance Enterprises.** Three hours.  
Prerequisite: Graduate standing.  
The functions performed within insurance and insurance-related institutions and the response of management to the changing needs of society.

**FI 649 Seminar on Insurance and Its Environment.** Three hours.  
The institution of insurance is viewed as one of many approaches to achieve environmental security.

**FI 698 Research in Finance.** Three hours.

**FI 699 Dissertation Research.** Variable credit. Three-hour minimum.
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7.6.4 GENERAL BUSINESS ADMINISTRATION (GBA)
Head: Professor Robert M. Morgan, Office: 104 Alston Hall

**GBA 501 Professional Development.** One hour.
Mini-lectures on current topics related to the profession of business.

**GBA 525 Strategy Formulation and Implementation.** Three hours.
Prerequisite: Admission to the MBA program.
An integrative study of the manager's role as chief strategy maker and chief strategy implementer, using case analysis and management simulation techniques.

**GBA 526 Competitive Strategy.** Three hours.
Prerequisite: GBA 525 or equivalent.
Examines conceptual tools for the in-depth analysis of industries and competitors; how to build and defend competitive advantages and how to formulate a successful competitive strategy. Usually offered spring semester.

**GBA 527 Managing Strategy Implementation.** Three hours.
Prerequisite: GBA 525 or equivalent.
An examination of the tasks of strategic leadership and the action alternatives for matching internal organizational conditions to the requirements of strategy execution. Usually offered spring semester.

**GBA 570 Starting New Ventures.** Three hours.
Focuses on strategy development, planning, identification of market opportunities, capital structure, organization, and operations start-up as applied to new-venture management.

**GBA 571 Management of Health Care Organizations.** Three hours.
Prerequisites: MGT 517 (MBA) or equivalent and EC 503 (MBA) or equivalent.
An analysis of the problems, issues, and environmental forces affecting management in health care organizations. Emphasis is given to the role of management and its particular functions in a health care environment.

**GBA 591 Independent Study.** Three hours.
Open to all graduate students on an elective basis. This course offers students an opportunity to pursue a course of study that they design according to their own interests. Students may also work on a faculty-directed research project and receive credit.

**GBA 592 Managerial Internship.** Three hours.
Open to all graduate students on an elective basis. Through the cooperation of participating organizations, students are exposed to actual management situations and are given an opportunity to apply classroom knowledge to practical decision problems.
HCM 570 Introduction to Health Systems. Three hours.

HCM 571 Management of Health Care Organizations. Three hours. 
Prerequisites: MGT 517 (MBA) or equivalent and EC 500 (MBA) or equivalent. 
An analysis of the problems, issues, and environmental forces affecting management in health care organizations. Emphasis is given to the role of management and its particular functions in a health care environment.

HCM 573 Advanced Issues in Health Care Management. Three hours. 
Prerequisites: Graduate status with: an undergraduate degree or enrollment in HCM, or health care related field; or enrollment in the MBA program, or instructor's permission. 
This course examines current policy and social issues in health care management. Students develop the analytical skills needed by decision makers of health care organizations.

HCM 575 Advanced Managed Care. Three hours. 
Prerequisites: Graduate status with: an undergraduate degree or enrollment in HCM, or health care related field; or enrollment in the MBA program, or instructor's permission. 
This course examines basic and advanced concepts of managed care for health care organizations – from physician practices to hospitals and health systems – with an emphasis on understanding and applying the business philosophy and practices of managed care organizations.

HCM 576 Advanced Long Term Care. Three hours. 
Prerequisites: Graduate status with: an undergraduate degree or enrollment in HCM, or health care related field; or enrollment in the MBA program, or instructor's permission. 
This course examines basic and advanced concepts of long term care organizations and management, with an emphasis on understanding the current delivery system and the unique challenges faced by practitioners, as well as the needs of long term care stakeholders.

HCM 577 Advanced Ambulatory Care. Three hours. 
Prerequisites: Graduate status with: an undergraduate degree or enrollment in HCM, or health care related field; or enrollment in the MBA program, or instructor's permission. 
This course examines basic and advanced concepts of ambulatory care organization and management, with an emphasis on the competencies needed to operate an ambulatory practice, as well as the skills needed to manage relationships with ambulatory care stakeholders.
Students who are interested in international business may select a concentration in economics or marketing. International courses are offered in marketing, economics, finance, legal studies, and accounting. It is strongly recommended that interested business students develop a working knowledge of a language other than English. Opportunities for dissertation research in international business are available in economics, management, and marketing.

**IBA 497/597 Special Topics in IBA.** Variable hours.

**IBA 550 Global Business.** Variable hours.  
Prerequisite: Admission to the MBA program.  
A seminar emphasizing the environmental factors affecting international business operations, and studying different economic, social, cultural, legal, and other environmental conditions and their influence on both the formulation and execution of business policy of firms engaged in multinational business.

**IBA 551 International Business Management.** Three hours.  
A seminar acquainting the student with the functions, problems, and decision-making processes of multinational business organizations. Representative cases are used as a basis for decisions. Offered spring semester.

**IBA 555 Global Marketing Management.** Three hours.  
The object of this course is to investigate the effects of cultural similarities and differences on marketing practices worldwide. Also examined are the effects of market idiosyncrasies on globally oriented products, promotion, pricing, and distribution strategies.
EC 530 International Economics. Three hours. 
Prerequisite: EC 430 or equivalent. 
Analysis and policy implications relating to the international movement of goods, resources, and financial assets.

FI 531 International Finance (same as EC 531). Three hours. 
Prerequisite: EC 430 or equivalent. 
An examination of the foreign exchange market, exchange rate determination, international financial institutions, and the management of the risks associated with international business.
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7.6.8 LEGAL STUDIES (LGS)

Head: Professor Billy P. Helms, Office: 206 Alston Hall

The School does not offer a graduate-level major program in legal studies. However, these courses will add breadth and a valuable background to any of the available graduate programs, by incorporating understanding of law within other disciplines.

**LGS 504 Legal Issues in Accounting.** Three hours.
Prerequisite: LGS 200.
Study of various legal issues in the accounting profession. Among topics covered are accountant liability, commercial transactions, and business organizations.

**LGS 522 Legal and Social Environment of Business.** Variable hours.
Prerequisite: Admission to the MBA program.
A study of the legal system, with an emphasis on government regulation, including antitrust law.

**LGS 591 Independent Study.** Variable credit.

**LGS 597 Special Topics in Legal Studies.** Variable credit.

**LGS 600 Problems in International Business Law.** Three hours.
7.6.9 MANAGEMENT (MGT)
Head: Professor Diane Johnson, Office: 104 Alston Hall

**MGT 510 Research Methods in Management.** Three hours.
This course familiarizes the student with the basic methodology for addressing issues and solving problems in modern organizations.

**MGT 511 Employee Recruitment, Selection, and Placement.** Three hours.
A course designed to acquaint the student with a scientific approach to the selection, training, and placement of employees. Validation of selection practices and evaluation of training programs are emphasized.

**MGT 517 Leadership and Ethics.** Three hours.
Prerequisite: Admission to the MBA program. This course is an overview of leadership theory and models including discussions of ethical issues that corporate decision makers face.

**MGT 520 Change Management.** Three hours.
The major objective of the course is to introduce students to the most recent thinking about strategic change, its drivers, and the techniques that are currently used for its management.

**MGT 522 Leadership Communication.** Three hours.

**MGT 527 Strategic Human Resources Management.** Variable credit.
An analysis of the methods and techniques used in the management of human resources.

**MGT 530 Labor Economics.** Three hours.
A course in the methods of economic analysis of the major problems of labor. Micro- and macroanalysis of wages, hours, employment, labor markets, and related public labor.

**MGT 532 Employee Relations.** Three hours. A critical examination of the factors that condition employee relations in both the private and public sectors. Topics covered include philosophies of management and how organizations resolve friction, the concept of industrial relations, systems theory, minority employment, and work and discontent.

**MGT 542 Management Communication.** Three hours.
Prerequisite: Admission to the MBA program.
Methodology for understanding both written and oral presentations. Students develop a language to use to manage written and oral verbal skills in specific business environments.

**MGT 582 New Venture Development.** Three hours. This course provides an opportunity to develop a business plan for a new venture or for expansion of an existing company. Students are expected to acquire skills in evaluating business ventures; to learn alternative financing sources; to develop ideas for differentiating products; and to develop an understanding of what is required to harvest the profits of a growing business.

**MGT 586 Small Business Consulting Field Project.** Three hours.
Prerequisite: By invitation only. This course is designed to offer education and training in the art of management consulting as it applies to smaller firms. The overall purpose of the course is the acquisition of knowledge and skills that will enable students to provide management advice to entrepreneurs and businesspersons to improve the performance of smaller organizations.

**MGT 591 Independent Study in Human Resources Management.** Three hours.
Open to graduate students with the approval of the chairperson of the human resources management program. This course offers graduate students in human resources management the opportunity to undertake a specialized course of study, under the guidance of an individual faculty member.
MGT 592 Internship in Human Resources Management. Three hours. Open to graduate students with the approval of the chairperson of the human resources management program. Graduate students receive on-the-job experience in human resources management in actual organizational settings, under the joint guidance of the cooperating organizational officials and faculty members.

MGT 597 Contemporary Issues in Performance Management. Three hours. A graduate seminar devoted to the study of current topics of interest.

MGT 598 Research in Management. Three hours. A supervised study of specific issues and problems in management. The course is open to students in their final semester of coursework leading to the completion of a master's degree in management.

MGT 599 Thesis Research. Variable credit.

MGT 610 Introduction to Management Thinking. Three hours. A critical analysis of the theories as well as the study of selected problems and developments in management thinking. The course places particular emphasis on the application of a wide range of social science theory and research to the study managerial thought.

MGT 620 Organizational Behavior and Individual Performance. Three hours. A course designed to develop thorough understanding of individual behavior within formal organizations. Consideration is given to a number of important behavioral processes, including learning, perception, attitudinal structuring, conflict, motivation, and social reinforcement. Attention is devoted to the individual's effect on the organization and the way behavior affects the achievement of organizational goals.

MGT 621 Organizational Behavior and Group Performance. Three hours. A study of human interaction and interpersonal behavior within working relationships. Emphasis is given to findings of the behavioral sciences as related to management problems. Theoretical and empirical approaches to issues such as communication, socialization, and role theory are presented.

MGT 622 Current Topics in HR Management. Three hours. A course that gives special attention to the human aspects of problems that arise in technical, social, and organizational arenas faced with the need to change. The course includes detailed analyses of organizations as systems and of organizational leadership, change, and development.

MGT 623 Contemporary Issues in Organizational Theory. Three hours. This course deals with the definition and grouping of work units, the relationships between work units, and the assignment of decision-making authority to units within a contingency framework. Special emphasis is placed on the influence of the external environment on the structure and design of the organization.

MGT 679 Theory Development and Testing (same as MKT 679). Three hours.

MGT 690 Research Methods I. Three Hours. The purpose of this class is to build skills in the design, conduct, and evaluation of research. Students are introduced to the basics of designing studies to test hypotheses and research.

MGT 691 Research in Organizational Management. Three hours. A course that provides an overview of theory, research, and techniques associated with the investigation of specific research problems in the fields of personnel management, industrial relations, and organizational behavior.

7.6.10 MANAGEMENT INFORMATION SYSTEMS (MIS)

**MIS 510 Principles of Systems Development.** Three hours.
Prerequisites: AC 489 and admission into the MMA program.
The role of accountants and auditors in the design, development, and operations of management information systems is addressed.

**MIS 511 Management Information Systems.** Two hours.
Prerequisite: Admission to the MBA program.
Motivation for, construction of, and application of MIS. Topics include IS strategic alignment, information intensive business processes, and decision making. Business analysis techniques are emphasized for systems such as TPS, e-business, management reporting systems, and data warehouses.

**MIS 514 Information Technology Boot Camp.** Three hours.
In-depth treatment of software engineering techniques for information systems business solutions.

**MIS 516 Practicum.** Three hours.
Prerequisite: MIS 514.
Experiential learning in a dual-coached, commercial IS environment reporting to faculty and organizational management. Projects started during the practicum continue through the remainder of the program.

**MIS 520 Systems Analysis and Design.** Three hours.
Prerequisite: MIS 511.
Techniques and methodologies of systems analysis and design are introduced, including conducting project scoping, requirements elicitation, requirements definition, and operations specifications.

**MIS 525 Information Systems Project Management.** Three hours.
Prerequisites: MIS 514 and admission to the MBA/MIS program.
Corequisite: MIS 520.
Techniques and methodologies of project level scoping, staffing, planning, scheduling, monitoring, and controlling the development of value-added information technology business solutions on time and within budget.

**MIS 527 Emerging Information Technologies Seminar.** Three hours.
Prerequisites: MIS 516 and admission to the MBA/MIS program.
Corequisite: MIS 520.
Exploration of the capabilities, potential uses, constraints, value and implications of emerging information technologies through analytical methods, measurement, and evaluation.

**MIS 530 Systems Development and Implementation.** Three hours.
Prerequisite: MIS 520.
Techniques and methodologies of project-level systems development and delivery are introduced including interface design, platform constraints, application architecture, testing, quality control, security, and performance evaluation.

**MIS 535 Information Systems Consulting.** Three hours.
Prerequisites: MIS 520 and MIS 525.
Corequisites: MIS 530.
Techniques and methodologies in client relationship management, proposal development, scope negotiation, component-based costing, knowledge management, software module and deliverable integration, systems deployment, and change management.

**MIS 540 Database Design, Construction, and Operations.** Three hours.
Prerequisite: MIS 514 or permission of the instructor.
Emphasizes commercial business application of relational DBMS. Topics include semantic data modeling, normalization, process triggers, enterprise integrated, ODBC, n-tier architecture, e-business application, and performance tuning.

MIS 542 Data Communication Design and Construction. Three hours.
Prerequisite: MIS 514 or permission of the instructor.
Advanced data communication design and construction concepts are explored, emphasizing the interaction between DC and software applications including international protocols, e-business, and mobile applications.

MIS 544 Systems Engineering Concepts. Three hours.
Prerequisite: MIS 520 or permission of the instructor.
Advanced systems engineering best practices, including the foundations of architecture-based systems and component-based development.

MIS 560 Enterprise Integration Methods. Three hours.
Introduction to techniques and methodologies of enterprise-level governance, architecture, analysis, design, procurement, integration and deployment.

MIS 562 Enterprise Integration Development. Three hours.
Prerequisite: MIS 560.
Application of techniques and methodologies to develop and deliver enterprise-level business information systems solutions.

MIS 591 Independent Study in Management Information Systems. Three hours.

MIS 592 Internship in Management Information Systems. Three hours.

MIS 597 Special Topics in Management Information Systems. Variable credit.

MIS 598 Research in Management Information Systems. Variable credit.
Open to students nearing completion of coursework for the master's degree. A supervised study and investigation of specific problems in management and management information systems.


MIS 670 MIS Research Seminar I. Three hours.
Prerequisite: Must be a C&BA PhD student.
The exploration of IS development and delivery research issues. Emphasis is placed on exploring the scientific method, theory building research, and methods of inquiry. Provides a framework for undertaking and evaluating MIS research.

MIS 680 MIS Research Seminar II. Three hours.
Prerequisite: MIS 670.
A continuation of MIS 670 designed to explore empirical testing research and methods used in scholarly IS development and delivery research.

MIS 685 MIS Research Seminar III. Three hours.
Prerequisite: MIS 680.
Examination of recent information systems development and delivery research. After reviewing current research in the area, participants will evaluate the state of IS development research and then draft a research proposal to address a critical research question of interest and merit.

MIS 697 Special Topics. Variable credit.

MIS 698 Research in Management Information Systems. Three hours.
Open to students nearing completion of coursework for the PhD degree. A supervised study and investigation of specific problems in management information systems.
7.6.11 OPERATIONS MANAGEMENT (OM)
Head: Professor Charles Sox, Office: 304 Alston Hall

OM 500 Management Science and Spreadsheet Modeling. Three hours.
Management Science concepts and applications in decision making. Emphasis is on problem formulation and interpretation of results using spreadsheet-based modeling and solution procedures.

OM 506 Business Spreadsheet Analytics. Three hours.
Prequisite: Admission to the MBA program.
Operations research concepts and applications in decision making. Emphasis is on problem formulation and interpretation of results using computer-based solution procedures.

OM 516 Operations Management. Three hours.
Prerequisite: Admission to MBA program.
This course will address the important concepts and issues related to the design and management of business operations including manufacturing, distribution, logistics, transportation, and service operations. The course will demonstrate how certain quantitative methods can be applied to the analysis and solution of problems that arise in operations management.

OM 517 Supply Chain Modeling and Analysis. Three hours.
Prerequisite: OM 500 or OM 506.
This course provides a framework and quantitative methods for designing, managing, and analyzing the supply chain operations needed to support a firm's business strategy. Students will study the structure of supply chain operations in terms of the following categories: facilities, information, inventory and transportation. Students will analyze the relationship between supply chain structure and performance through case studies and examples that require students to develop analytical models to support their conclusions.

OM 522 Operations Scheduling Problems. Three hours.
Prerequisite: OM 500 or OM 506. A broad investigation of a variety of scheduling activities in production, logistics or service environment are discussed. Typical topics include project scheduling, job-shop scheduling, routing related problems and manpower scheduling.

OM 523 Inventory Management. Three hours.
Prerequisite: ST 509 or ST 550 or ST 560.
Control techniques for the large multi-term inventories frequently associated with manufacturing supply and wholesale-retail operations are studied. The limitations and usefulness of models in actual practice are discussed. Coverage includes reorder-point procedures, single-period problems, and dynamic situations.

OM 524 Manufacturing Scheduling and Control Systems. Three hours.
Prerequisite: OM 500 or OM 506 AND ST 509 or ST 550 or ST 560.
An in-depth, analytical study of the systems used in manufacturing planning and control are covered. Alternative approaches used in practice (such as MRP and JIT) are studied.

OM 525 Effective Quality Management. Three hours.
Prerequisites: None.
Provide participants with a broad understanding of philosophies and methods used to enhance organizational effectiveness in a wide range of organizational settings.

OM 527 Purchasing and Sourcing. Three hours.
Prerequisites: OM 300.
Fundamental purchasing systems applications, supplier relations and evaluation, strategic planning in purchasing, purchasing techniques, value analysis and cost analysis.
OM 540 Systems Simulation. Three hours.
Prerequisites: ST 509 or ST 550 or ST 560.
A study of the management applications of stochastic and deterministic mathematical and computer models in systems design and analysis.

OM 542 Systems Simulation II. Three hours.
Prerequisite: OM 540. Methodology of systems simulation, including modeling, model inputs, simulation mechanics, output analysis, validation, and design of simulation experiments.

OM 550 Process Management and Improvement. Three hours.
Prerequisite: Admission to Graduate Program.
An analytical study of strategies, tactics and techniques for designing, evaluating, analyzing, controlling, and improving processes. Emphasis is on topics such as Design for Flexibility, Lean, Six Sigma, Constraint Management will be included along with process applications of OM analytical tools such as simulation, queuing analysis, and value stream mapping.

OM 591 Independent Study in Operations Management. Three hours.

OM 592 Internship in Operations Management. Three hours.

OM 597 Special Topics in Operations Management. Variable credit.

OM 598 Research in Operations Management. Variable credit.
Open to students nearing completion of coursework for the master's degree. A supervised study and investigation of specific problems in management and operations management.

OM 600 Linear Programming: Theory and Applications. Three credit.
Prerequisite: MATH 237 or permission of the instructor.
The theory and application of linear programming are rigorously studied. Software tools such as AMPL and OPL Studio for solving linear programs are introduced.

OM 601 Stochastic Decisions Models. Three hours.
Prerequisite: MATH 557. Probabilistic models in the decision-making process are discussed. Attention is given to the assumptions, development, and administrative implications of dynamic programming, queuing analysis, and decision analysis.

OM 602 Integer and Nonlinear Optimization. Three hours.
Prerequisite: OM 500.
Advanced optimization models are introduced and discussed. Topics include integer programming models and nonlinear programming models, and solution techniques for these problems.

OM 620 Production Management Models. Three hours.
Prerequisite: OM 500.
A quantitative study of models and procedures used in various decision problems addressed by production and operations managers is completed in this course. Mathematical modeling and optimization software packages are used in solving these models.

OM 622 Theory of Production Scheduling. Three hours.
Prerequisites: OM 522.
A rigorous mathematical treatment of various scheduling models and techniques are covered. Topics include performance measures, complexity theory, single machine sequencing, flowshop scheduling, the job-shop problem, and priority dispatching.

OM 623 Inventory Theory. Three hours.
Prerequisites: OM 523, MATH 557, and ST 550 or ST 560.
A rigorous, mathematical treatment of stochastic single- and multi-item inventory models is performed. A numerical analysis and software package is used to implement and analyze such models.
OM 697 Special Topics. Variable credit.

OM 698 Research in Operations Management. Three hours. Open to students nearing completion of coursework for the PhD degree. A supervised study and investigation of specific problems in management and operations management.

MKT 300 or its equivalent is a prerequisite for all 400-level courses; MKT 518 or its equivalent is a prerequisite for all 500- and 600-level courses.

**MKT 510 Product Design and Management.** Three hours. An intensive investigation of the process of new product development, including its role in the organization, analysis of market opportunities, creative idea generation, concept screening, design, forecasting, manufacturing, and launch. Teaching emphasis is on processes, tools, and techniques. A group project provides real-world product development experience.

**MKT 511 Supply Chain Management.** Three hours. Prerequisite: MKT 518 or equivalent. MKT 511 is a graduate (master's) level counterpart to MKT 411 Supply Chain Management. Its focus is on providing a managerial perspective of best practice supply chain management. The course encompasses the collaborative strategies and planning processes needed to build and manage supply chains for systemic effectiveness and efficiency. It will be offered cotermiously with MKT 411 during each spring semester. The target students for MKT 511 are MBA's with marketing concentrations and master of arts (MA) and master of science (MSC) students in marketing. Graduate students in other degree programs may also enroll as an elective for graduate credit.

**MKT 518 Marketing Management and Decision Making.** Three hours. Prerequisite: Admission to the MBA program. A combination of lectures and cases is used to examine and analyze the marketing process. Emphasis is on decision making: the refinement of skills needed to recognize and solve marketing problems, and to effectively communicate recommendations both within and without the organization. The following components of the marketing mix are examined: product management, pricing, promotion, personal selling, buyer behavior, marketing channels, distribution, and segmentation.

**MKT 519 Survey of Marketing.** Three hours. Same as MKT 518 for non-MBA students.

**MKT 521 Seminar in Retailing Management.** Three hours. A critical, decision-oriented seminar on the issues involved in retailing management. The focus is on current readings, case analyses, and guest speakers.

**MKT 522 Strategic Logistics Management.** Three hours. Prerequisite: Permission of the instructor. A study of the role of logistics in national and multinational business. Logistics-system elements and their interrelationships are reviewed, including trade-offs. A variety of analytical tools and techniques for solving logistical problems is presented, and the use of customer service to achieve differential advantage in the marketplace is explored. Students use case analyses, actual industry studies, and computer simulations to create practical solutions.

**MKT 528 (MBA) Measuring Marketing Effectiveness.** Three hours. Tools and techniques of managing and measuring marketing activities are examined. Topics include contribution and segmental analysis; planning, budgeting, and controlling components in the marketing mix; monitoring product/customer market performance; developing analytical databases; and financial measurement techniques such as ROI, net present value, forward buying, and inventory carrying costs. Students use a computer-based decision support system (DSS) to analyze many concepts taught in this course.

**MKT 530 Advanced Marketing Analysis.** Three hours. This course for Master of Science in Marketing and second-year MBA students concerns the generation of marketing research results to help make marketing decisions. The course is designed to complement and build on the skills acquired in Marketing 518, the Survey of
Marketing course. The core of Marketing 530 is decision-relevant data—planning its acquisition, getting it from a variety of internal, secondary, and primary sources, analyzing it, and using it as the basis of decisions. The course also provides students with marketing analytics-centered skills (ANOVA, regression, factor, and cluster analysis). Knowledge developed in the courses can be applied in the fields of market management, product management, and project management. This course also helps prepare students to successfully complete team-based projects (Marketing 581) in the spring semester.

**MKT 531 Services Marketing.** Three hours.
An examination of how service firms achieve and maintain marketing excellence.

**MKT 538 Sales Management.** Three hours.
The purpose of the course is to familiarize students with the problems and tasks faced by sales managers, to present principles and applications of effective sales management, and to develop students' ability to critically analyze and provide solutions to problems of sales management.

**MKT 544 Promotional Strategy Management.** Three hours.
An analysis of the promotion mix and how it can be utilized to achieve managerial objectives.

**MKT 555 Global Marketing Management.** Three hours. (same as IBA 555).
The objective of this course is to investigate the effects of cultural similarities and differences on marketing practices worldwide. Also examined are the effects of market idiosyncrasies on globally oriented product, promotion, pricing, and distribution strategies.

**MKT 581 Project Management in Marketing.** Three hours.
Prerequisite: MKT 530.
This course is devoted entirely to the completion of real-world marketing projects for specific organizational clients. Teams are created based on skills and interests as well as the needs of the clients. The scope of each project is determined by the needs of the client, but it typically is based in decision-making insights from marketing research and involves one or more of such marketing-oriented tasks as: market segmentation and target marketing activities associated with a proposed new product, service, or strategic initiative; the gathering and application of marketing research pertinent to an important GO/NO GO decision by the firm; gauging specific reaction from the potential customer market regarding a proposed new initiative by the client; evaluating the potential competitive advantage of a strategic or tactical move by the firm; creation of and implementation of a plan for research, promotion, launch, pricing, and/or distribution for some aspect of the firm’s business. This course is unique. It allows students to use the skills and knowledge that they have acquired in graduate marketing courses as well as build new skills in marketing analysis, project management, client relationship building/maintenance skills, communications, decision-making, and leadership.

**MKT 591 Independent Study in Marketing.** Three hours.

**MKT 592 Internship in Marketing.** Three hours.

**MKT 597 Special Topics in Marketing.** Variable credit.

**MKT 598 Research Methods I.** Three hours.
A course that provides the student with an understanding of the principles, tools, and techniques of research in the fields of human resources management and marketing.

**MKT 599 Thesis Supervision.** Variable credit.

**MKT 613 Behavioral Theory and Qualitative Methodology.** Three hours.
This course focuses on the use of qualitative methodology as a way to ground theory, in combination with a focus on the application of consumer psychological and behavioral topics in such contexts as services, retailing, shopping, and relationship marketing. Offered spring semester, every other year.

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**MKT 627 Inter-Organizational Systems.** Three hours. An examination of inter-organizational distribution systems stressing the evolution of channel theory. Theoretical explanations of structural dynamics and the analysis of channel behavioral constructs (e.g., channel power, conflict, and leadership) are stressed. Offered every other year.

**MKT 661 History of Marketing Thought.** Three hours. The study of the development of marketing ideas, concepts, and theories from 1900 to the present. The influence and contribution of individuals to marketing concepts will be stressed. Offered according to demand.

**MKT 674 Measurement and Structural Equation Modeling.** Three hours. Prerequisite: ST 550. A course that covers measurement theory and how it is applied in scientific research. Students learn to construct effective questionnaires, to develop psychometrically-sound measures of constructs, and to assess measure reliability and validity. Quantitative methods, including exploratory factor analysis, confirmatory factor analysis, and structural equation modeling, are emphasized. Offered fall semester.

**MKT 679 Theory Development and Testing.** Three hours. (same as MGT 679). Prerequisites: MKT 674, ST 550, and ST 551. The course presents the causal models approach to theory construction. Emphasis is given to integrating verbal approaches to theory building with the construction of simultaneous equation mathematical models with causal interpretations. Offered fall semester.

**MKT 685 Theory of Market Development.** Three hours. Prerequisite: MKT 518 or equivalent. A study of the spatial and temporal dimensions of marketing activity, including a study of the location and development of markets, extent and shape of market areas, models of the location process, consumer spatial behavior, and probabilistic choice modeling.

**MKT 688 Survey of Marketing.** Three hours. Prerequisites: MKT 518. This course surveys several marketing topics. These include some data analysis tools, such as discriminant analysis, cluster analysis, perceptual mapping, and conjoint analysis; an introduction to some substantiative topics, such as segmentation, new product diffusion, supply chain management, and attitude-to-the-ad; plus a brief overview of some selected marketing modeling topics. Offered fall semester, every other year.

**MKT 690 Behavioral Theory and Methodology.** Three hours. This course begins with an examination of theory and theory development. It then follows with a consideration of various methodological approaches, with a heavy focus on experimental design. Finally, throughout, substantive behavioral and marketing topics are considered in detail, including attitudes and persuasion, advertising and branding effects, judgment and decision making, and the role of affect and emotions. Offered fall semester, every other year.

**MKT 691 Graduate Seminars in Marketing: Marketing Strategy.** Three hours. Prerequisite: MKT 518 or equivalent. Through the reading of this course, we will explore in depth several specific areas that are informed by strategic marketing thought. We will not only trace the development of theory in marketing strategy, but chart several courses for future research.

**MKT 698 Research in Marketing.** Three hours.

**MKT 699 Dissertation Supervision.** Variable credit. Three-hour minimum.
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7.6.13 STATISTICS (ST)

Head: Professor Charles Sox, Office: 304 Alston Hall

ST 509 Statistics for Business Applications. Three hours.
Prerequisite: Admission to the MS program.
A broad introduction to statistical and probabilistic methods useful for managerial decision making. Topics include graphical displays, numerical summaries, basic probability models, confidence intervals, hypothesis testing, and regression analysis.

ST 521 Statistical Data Management. Three hours.
Introduction to the management of data using SAS. The collection and management of data from business or scientific research projects are emphasized.

ST 522 Advanced Statistical Data Management. Three hours.
Prerequisite: ST 521 or equivalent.
This course provides students with insight and understanding into the advanced aspects of data management. Emphasis will be placed on computer techniques for the preparing and cleaning of data from scientific research projects as well as for business-oriented projects in order to conduct advanced level analyses. Techniques for detecting, quantifying, and correcting data quality will be covered.

ST 531 Knowledge Discovery and Data Mining I. Three hours.
Prerequisite: ST 550, ST 560 or ST509 equivalent.
Data mining is the process of selecting, exploring, and modeling large amounts of data to uncover previously unknown patterns of data. Techniques for accomplishing these tasks in a business setting will be discussed.

ST 532 Advanced Data Mining. Three hours.
Prerequisite: ST 531 or equivalent.
A detailed study of data mining techniques including logistic regression, neural networks, decision trees, general classifier theory, and unsupervised learning methods. Mathematical details and computer techniques are examined. The SAS programming language and SAS's Enterprise Miner will be used to accomplish these tasks. Other packages may also be used.

Development of fundamental concepts of organizing, exploring, and summarizing data; probability; common probability distributions; sampling and sampling distributions; estimation and hypothesis testing for means, proportions, and variances using parametric and nonparametric procedures; power analysis; goodness of fit; contingency tables. Statistical software packages are used extensively to facilitate valid analysis and interpretation of results. Emphasis is on methods and on selecting proper statistical techniques for analyzing real situations.

ST 551 Statistical Methods for Applied Research II. Three hours.
Prerequisite: One of the following—GES 400, GES 500, BER 540, CHS 425, CHS 525, ST 450, ST 550, ST 560.
Analysis of variance and design of experiments, including randomization, replication, and blocking; multiple comparisons; correlation; simple and multiple regression techniques including variable selection, detection of outliers, and model diagnostics. Statistical software packages are used extensively to facilitate valid analysis and interpretation of results. Emphasis is on appropriate analysis of data in real situations.

ST 552 Applied Regression Analysis. Three hours.
Prerequisite: ST 450 or ST 550 or ST 560 or ST 509.
Modeling issues for multiple linear regression are discussed in the context of data analysis. These include the use of residual plots, transformations, hypothesis tests, outlier diagnostics, analysis of covariance, variable selection techniques, weighted least squares and collinearity. The uses of multiple logistic regression are similarly discussed for dealing with binary-valued

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dependent variables.

**ST 553 Applied Multivariate Analysis.** Three hours.  
Prerequisite: ST 451, ST 551, or ST 561.  
Methods and business applications of multivariate analysis, discriminant analysis, canonical  
correlation, factor analysis, cluster analysis, and principal components.

**ST 554 Mathematical Statistics I.** Three hours. *(same as MATH 554).*  
Prerequisite: MATH 227.  
Distributions of random variables, moments of random variables, probability distributions,  
joint distributions, and change of variable techniques.

**ST 555 Mathematical Statistics II.** Three hours. *(same as MATH 555).*  
Prerequisite: ST 554.  
Theory of order statistics, point estimation, interval estimation, and hypothesis testing.

**ST 560 Statistical Methods in Research I.** Three hours.  
Prerequisite: MATH 121 or 125.  
Statistical methods for summarizing data; probability; common probability distributions;  
sampling and sampling distributions; estimation and hypothesis testing for means,  
proportions, and variances using parametric and nonparametric procedures; power analysis;  
goodness of fit; contingency tables; and simple regression and one-way analysis of variance.

**ST 561 Applied Design of Experiments.** Three hours.  
Prerequisite: One of the following—GES 400, GES 500, BER 540, CHS 425, CHS 525, ST 450,  
ST 550, ST 560.  
An introduction to the design and analysis of experiments. Topics include factorial, fractional  
factorial, block, incomplete block, and nested designs. Other methods discussed include  
Taguchi Methods, response surface methods, and analysis of covariance.

**ST 570 Time Series Analysis.** Three hours.  
Prerequisite: ST 551, EC 671, or permission of the instructor.  
Modeling of both stationary and non-stationary time series. Autoregressive (AR) processes  
and moving average (MATH) processes, as well as mixed (ARMA) processes, are discussed,  
along with model identification and estimation and forecasting procedures. Computer software  
is used.

**ST 575 Statistical Quality Control.** Three hours.  
Prerequisite: ST 550 or ST 560 or equivalent.  
Statistical methods useful in control and improvement of manufactured products, including  
statistical process control with variables and attribute control charts, and process  
improvement with designed experiments. Emphasis is placed on design, implementation, and  
interpretation of the techniques.

**ST 580 Analysis of Categorical-Level Data.** Three hours.  
Prerequisite: ST 451 or ST 560.  
Logit and probit models, including dichotomous and multichotomous response functions;  
discrete choice models; log-linear models for multi-way contingency tables; procedures for  
analyzing ordinal-level data.

**ST 591 Independent Study in Statistics.** Three hours.

**ST 592 Internship in Statistics.** Three hours.

**ST 597 Special Topics in Statistics.** Variable credit.

**ST 598 Research in Statistics.** Variable credit.

**ST 599 Thesis Research in Statistics.** Variable credit.

**ST 603 Advanced Inference.** Three hours.
Prerequisite: ST 555 or equivalent.
A continuation of ST 555, with emphasis on the general theory of estimation and hypothesis testing and large sample distribution theory.

**ST 610 Linear Models.** Three hours.
Prerequisite: ST 555 or equivalent.
Gauss-Markov Theorem, solution of linear systems of less than full rank, generalized inverse of matrices, distributions of quadratic forms, and theory for estimation and inference for the general linear model.

**ST 615 Theory of Regression.** Three hours.
Prerequisite: ST 610.
Theory of the general linear regression models and inference procedures, variable selection procedures, and alternate estimation methods including principal components regression, robust regression methods, ridge regression, and nonlinear regression.

**ST 635 Nonparametric Statistics.** Three hours.
Prerequisite: ST 554 equivalent.
Theory and applications of various nonparametric statistical methods are covered for one-sample, two-sample, and multi-sample problems. Goodness of fit techniques such as Chi-square and the kolmogorov-Smirnov test are covered along with graphical analysis based on P-P and Q-Q plots. Computer software such as MINITAB, SAS, and STATXACT are used.

**ST 640 Statistical Computing.** Three hours.
Prerequisites: ST 552 or its equivalent; MATH 237 or its equivalent; and experience with a computer programming language such as FORTRAN, C, Pascal, or Basic; or permission of the instructor.
Topics include a survey of current statistical software, numerical methods for statistical computations, nonlinear optimization, statistical simulation, and recent advances in computer-intensive statistical methods.

**ST 675 Advanced Statistical Quality Control.** Three hours.
Prerequisite: ST 555, ST 575, or equivalent.
Theoretical approaches to statistical process control procedures and the design of experiments for quality improvement.

**ST 697 Special Topics.** Variable credit.

**ST 698 Research in Statistics.** Three hours.
Open only to graduate students nearing completion of coursework. Independent study and investigation of specific problems for advanced students of statistics.

**ST 699 Dissertation Research.** Variable credit. Three-hour minimum.
8.1 PROGRAM ADMINISTRATION

The graduate programs in the College of Communication and Information Sciences are administered by the associate dean for graduate studies, by various administrative divisions within the College, and by the Graduate School. The college has one PhD degree program. It is an interdisciplinary program that draws on all subdivisions of the College and is administered by the associate dean for graduate studies and by the graduate studies committee. The master of arts degree programs are administered by the associate dean, by divisional or department heads, and by department program directors.

All curricula offered by the College of Communication and Information Sciences have been accredited by regional associations. The undergraduate programs in the College are accredited by the Accrediting Council on Education in Journalism and Mass Communication.

FINANCIAL AID

All divisions of the College of Communication and Information Sciences offer a limited number of graduate assistantships to qualified students. The assistantships are awarded on a competitive basis to individuals who can best aid the institution in achieving its research and instructional missions. Students interested in graduate assistantships should apply to the appropriate departments by November 1 for spring semester applications and by April 1 for fall semester applications. Some deadlines vary by departments so check under specific department for deadlines. February 15 is the deadline for PhD program applications. Other financial aid available from the University is described earlier in this catalog.
THE UNIVERSITY OF ALABAMA GRADUATE CATALOG

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8.2 MASTER OF ARTS IN COMMUNICATION

The master of arts degree programs in the College of Communication and Information Sciences are designed to:

- Enable students to study communication from an individual, group, institutional, societal, or cultural perspective or combination thereof, using a variety of humanistic and social-scientific approaches
- Enable students to begin or continue preparation for professional careers in media and media-related fields, teaching, research, governmental agencies, and industry
- Enable students to specialize within one of the following academic departments: Advertising/Public Relations, Communication Studies, Journalism, or Telecommunication and Film
- Prepare students to continue their studies at the doctoral level

Admission Requirements

Graduate students in the College of Communication and Information Sciences must meet the admission requirements of the Graduate School (see Admission Criteria) of The University of Alabama. Word processing proficiency is required in all writing and editing courses offered by the communication areas of the College (advertising/public relations, journalism, and telecommunication and film). Word processing proficiency is not a requirement for communication studies courses.

Each applicant must submit test scores from either the Graduate Record Examination general test or the Miller Analogies Test in support of the application. The Department of Advertising and Public Relations does not accept the Miller Analogies Test.

Applications for the fall semester should be submitted to the Graduate School by April 1. Applications for the spring semester should be submitted by November 1.

Admission into the Doctoral program with a BA Degree

Those who wish to apply for admission directly into the college-wide doctoral program after completing a BA must have majored in Communication and Information Sciences, must have shown superior aptitude at the undergraduate level, and must meet the Graduate School’s normal requirements for admission at the doctoral level. Qualified students begin this graduate coursework within a specific master of arts degree program of the College and complete their graduate degree as College-wide doctoral candidates.

To be admitted directly into the doctoral program, one must satisfy the following requirements:

- Hold regular admission status for a specific college MA program and for admission into the PHD program
- Submit a statement of purpose indicating interest and commitment in graduate work through the doctoral level
- Successfully pass a comprehensive qualifying exam, upon completing 24 hours of graduate coursework for continuing with the doctoral degree
- Earn a certificate of completion, or equivalent, for the MA program, whereupon admission into the doctoral program becomes official
**General Requirements for the MA Degree**

In consultation with an advisor, the student selects a graduate major in one of the academic departments of the College. There are two options that students may choose for pursuing the master of arts degree.

**Plan I, master's thesis.** The student's curricular and research interests culminate in the completion of a traditional master's thesis. Students must take a minimum of 30 hours of approved graduate courses, of which 6 are specifically for the thesis. See departmental sections below for required and recommended courses.

**Plan II, nonthesis option.** Students must take a minimum of 30 hours of approved graduate courses. See departmental sections below for the specific nature of this option and its requirements.

Regardless of the option selected, each student must satisfy the following requirements:

- MC 550 Communication Research Methods (3 hours) or department-approved equivalent
- MC 551 Seminar in Communication Theory (3 hours) or department-approved equivalent
- Written comprehensive examination or equivalent, as specified by the student's departmental committee
- Final oral examination or equivalent, as specified by the student's departmental committee

Admission to the Graduate School does not imply admission of a student to candidacy for a degree. Admission to candidacy is contingent upon the recommendation of the student's department and the approval of the graduate dean.

The application for Admission to Candidacy for the Master's Degree should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama. It must be approved by the time of registration for the semester in which requirements for the degree are completed.

Additional information is in the Degree Requirements section of this catalog.
8.3 MASTER'S PROGRAMS IN THE SCHOOL OF LIBRARY AND INFORMATION STUDIES

Master of Library and Information Studies (MLIS)

The program leading to the master of library and information studies (MLIS) degree is a 36-credit-hour program, one of approximately fifty-five programs in the United States and Canada accredited by the American Library Association and the only ALA-accredited program in the state of Alabama. The degree prepares graduates to work in any type of library or information center—public, K–12, academic, or special—and in entrepreneurial and research environments, especially those using advanced information technologies.

Master of Fine Arts in the Book Arts (MFA)

The program leading to the master of fine arts (MFA) degree in the book arts is a 60-credit-hour course of study. The following four areas comprise the MFA: printing/publishing, bookbinding, papermaking, and the history of the book, with a program emphasis on the book as an integrated unit. Emphasis is placed on developing craft skills based on historical principles and techniques, as well as artistic expression.

Detailed information on both the MLIS and MFA programs is in the School of Library and Information Studies (LS) section of the Catalog.

Educational Objectives

The educational objectives of these graduate programs are as follows:

- **Teaching.** Provide students with the knowledge, skills, understanding, and diverse technologies to meet the changing informational and cultural needs of diverse populations and organizations. Foster leadership skills and abilities in all students, provide opportunities within the program for students with leadership potential to exercise their abilities, and encourage students as graduates to seek out and assume leadership roles. Improve and develop students' critical and conceptual thinking skills.

- **Research and creative activity.** Augment and advance knowledge through basic research and improve professional practice through systematic inquiry into its nature, standards, and principles.

- **Service.** Apply the insights and knowledge gained through research and instruction in service to public- and private-sector organizations.

See the online Graduate Catalog for specific information on admission criteria and degree requirements.
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8.4 DEPARTMENT OF ADVERTISING AND PUBLIC RELATIONS (APR)
Chairperson: Professor Joseph Phelps, Office: 307 Reese Phifer Hall

The master of arts programs in advertising and public relations are intended for those who wish to acquire advanced understanding of and skills in the development of highly effective persuasive communication. The programs focus on prevailing communication theories, current research findings, and advanced practical techniques. The faculty seeks to educate highly competent, focused students who will be recognized for their leadership qualities: the ability to discern issues both in the practice of their profession and in their role in society; the ability to develop and execute successful communication programs; and the ability to lead others effectively.

Two programs are offered: (1) a two-year thesis program with specialization in advertising or public relations (Plan I), and (2) a one-year professional program combining advertising and public relations (Plan II).

Admission Requirements

Admission to graduate work in advertising and public relations requires a 3.0 or higher undergraduate grade point average (on a 4.0 scale) and a combined score of at least 1000 on the verbal and quantitative portions of the Graduate Record Examination general test. The department also accepts the Graduate Management Admissions Test with prior approval. International students are required to obtain scores of 600 or better on the centrally administered version of the Test of English as a Foreign Language (TOEFL). Required supporting materials include a statement of career objectives and three letters of reference (at least two from academic sources).

The deadline for all application materials to have arrived at the department is March 1. This is an earlier deadline than those established by the Graduate School and most other departments at the University of Alabama.

Conditional admission sometimes may be granted for a student who falls below the minimum grade point average or test score requirements. Students admitted conditionally must earn at least a 3.0 grade point average for their first 12 credit hours.

Each student's progress will be guided by an academic advisor or by the departmental director of graduate studies. Students in each program must maintain minimum grade point averages of 3.0 and may receive no more than two "C" grades to be eligible to continue.

Additional information is in the Admission Criteria section of this catalog.

Degree Requirements

Plan I, the Two-Year Research Program

The two-year master's degree program is intended for students seeking a strong research emphasis in their study of advertising and public relations. The Plan I program focuses on important problems and questions, gathering evidence, and setting standards for inference. The program specifically prepares students in the areas of (a) mastering the body of scholarly knowledge of advertising and public relations, and (b) contributing to the advancement of knowledge in these fields through basic and applied research. Students may decide to continue their studies, pursuing doctorates in advertising or public relations. Students in the Plan I program specialize in either advertising or public relations, learn the concepts and methods involved in productive scholarship, and collaborate with faculty members in conducting research.

http://graduate.ua.edu/catalog/20200.html
**Plan I requirements.** Plan I is normally a two-year program and requires (a) a minimum of 30 hours of approved graduate courses, (b) demonstration of proficiency in research skills, (c) passing of a comprehensive written examination, and (d) completion and successful defense of a master’s thesis. Students admitted to the program with little or no previous coursework in advertising or public relations may be required to take one or more undergraduate courses in the department to supplement their graduate studies.

All required graduate courses in the Plan I program are listed below; cognates and electives are chosen subject to the approval of the student's academic advisor.

<table>
<thead>
<tr>
<th>Required courses</th>
<th>Semester hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>APR 550 Advertising/Public Relations Communication Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>APR 551 Advertising/Public Relations Communication Theory</td>
<td>3</td>
</tr>
<tr>
<td>APR 570 Contemporary Advertising and Public Relations</td>
<td>3</td>
</tr>
<tr>
<td>APR 583 Research Applications in Advertising and Public Relations</td>
<td>3</td>
</tr>
<tr>
<td>Cognates</td>
<td>9</td>
</tr>
<tr>
<td>Elective (APR, JN, MC, or TCF course numbered above 550)</td>
<td>3</td>
</tr>
<tr>
<td>APR 599 Thesis Research</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Nine hours of this program are devoted to a cognate area, usually outside the College of Communication and Information Sciences. The cognate is intended to provide concentrated study in an area related to the student's career interests. The cognate typically consists of courses in one discipline, but it can consist of courses in several disciplines if the overall topic is unified and contributes to the student's objectives. Cognate examples include marketing, organizational communication, psychology, sociology, and political science.

Research proficiency can be demonstrated by successful completion of one or more statistics or computer science courses approved by the student's academic advisor, or by proficiency in the research methods appropriate to the student's master’s thesis.

Following completion of all coursework, students must pass a comprehensive examination.

The student must select a faculty member to chair the thesis committee. In concert with the thesis chairperson, the student chooses a three-member thesis committee. One member must be from outside the Department of Advertising and Public Relations. Working with this committee, the student identifies an appropriate thesis topic and research approach. A thesis proposal must be approved by the thesis committee before a student is permitted to begin work on thesis research. The completed thesis must be defended in an oral examination before the thesis committee.

**Plan II, the One-Year Professional Program**

The professional program is an intensive, professionally oriented, one-year program that combines advertising and public relations. Recognizing the increasingly close links between the advertising and public relations professions, the Plan II program provides advanced preparation in both disciplines. The program provides intensive training to meet specific objectives. Graduates will be prepared to:

- develop a thorough understanding of the institutions and processes involved in advertising and public relations, through a combined program of study
- use research both to generate communication strategies and to evaluate the success of communication programs
- write idea-driven persuasive communication
• plan, implement, and evaluate media plans for advertising and public relations programs and campaigns

The Plan II program is for recent college graduates who see the advantages of having advanced skills in advertising and public relations. The students will recognize that preparation in the liberal arts, business administration, or communication has provided them with important knowledge but has not sufficiently prepared them in the communication concepts and skills needed to be a leader.

Speaking and writing skills are emphasized in all courses, with frequent papers and presentations. One course each semester emphasizes writing skills involved in the advertising and public relations professions.

**Plan II requirements.** The one-year Plan II program requires (a) completion of a specific 33-hour program of graduate courses, (b) demonstration of proficiency in research skills, (c) passing of a comprehensive written examination, and (d) completion of a master's project in the course APR 598 Communication Workshop. Students admitted to the program will receive a list of critical readings and will be expected to become familiar with these materials before beginning the program. The program starts with a series of orientation sessions aimed at evaluating each student's grasp of the critical readings and ability to proceed with the program without further background study.

Plan II required courses are as follows (semester assignments are provided only as illustration):

**Fall semester**
- APR 570 Contemporary Advertising and Public Relations
- APR 572 Persuasive Communication
- APR 550 Advertising/Public Relations Communication Research Methods
- APR 551 Advertising/Public Relations Communication Theory

**Spring semester**
- APR 522 Media Planning*
- APR 582 Advertising and Public Relations Management
- APR 583 Research Applications in Advertising and Public Relations
- APR 592 Integrated Communication Project*

*Depending on the student's background, an elective course may be substituted for APR 522 or APR 592.

**Interim session**
- APR 590 Visual Communication

**First summer session**
- APR 597 Communication Campaign Workshop I

**Second summer session**
- APR 598 Communication Campaign Workshop II

Research proficiency can be demonstrated by completion of APR 550 and APR 583 with grades of "B" or better, or by successful application of research methods appropriate to the student's project.

The comprehensive examination will be conducted during the first week of the first summer term and may be attempted only twice.

Each year two faculty members serve on the project committee for the Plan II master's degree program. Those faculty members read each of the project reports submitted by students at the conclusion of APR 597/APR 598, and other faculty members may also attend the project presentations given by students at the end of this course.
Admission to the Graduate School does not imply admission of a student to candidacy for a degree. Admission to candidacy is contingent upon the recommendation of the student's department and the approval of the graduate dean.

The application for Admission to Candidacy for the Master's Degree should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama. It must be approved by the time of registration for the semester in which requirements for the degree are completed.

See the online Graduate Catalog (Sec. 4.11.3) for details on Comprehensive Examination, Admission to Candidacy, and all other degree requirements.
The Department of Communication Studies offers programs leading to the master of arts degree.

**Admission Requirements**
The department reviews admission applications for both fall and spring admission. Applications submitted to the Graduate School by May 1 will be reviewed by the department for fall admission. Applicants must submit one of the following examination scores in support of the application: the Graduate Record Examination general test or the Miller Analogies Test. Subject to the approval of the department chairperson and the dean of the Graduate School, a maximum of 12 semester hours of graduate courses may be transferred from another institution. These hours must be in communication studies or in a closely allied subject and must contribute to the educational objectives of the student.

Graduate students in communication studies may choose their electives in such areas as rhetorical theory and criticism, political communication, human communication theory, interpersonal and organizational communication, or cultural, critical studies. To apply for departmental graduate assistantships, which are usually awarded only in the spring for the following year, applicants must have been accepted for admission into the program, by the department, not later than March 1. A minimum of 24 graduate hours must be completed in communication studies.

Additional information is in the Admission Criteria section of this catalog.

**Requirements for the MA Degree**
The Department of Communication Studies uses a form of contract advising. Graduate students are required to plan contractual programs of study with their assigned advisors during the first semester of coursework. These contractual programs must be approved by the academic advisor and filed with the graduate program director by the end of the first semester of coursework. Each program must meet the minimum requirements of the Graduate School, the College of Communication and Information Sciences, and the Department of Communication Studies.

**Degree Requirements**
A master of arts degree in communication studies requires a minimum of 30 hours, based on the following two component areas of study:

**Core requirements (18 semester hours)**

**Theory requirements (12 semester hours)**
- COM 545 Classical Rhetorical Theory
- COM 541 Contemporary Rhetorical Theory or CIS 605
- COM 561 Human Communication Theory, or approved equivalent
- COM 513, COM 569, or approved multicultural/diversity communication course

**Methods requirements (6 semester hours)**
- Plan I Thesis or Plan II: Academic/Comprehensive Examination
- COM 548 Seminar in Rhetorical Criticism or approved research methods course, such as BER 631, MC 550, LS 502, MC 581.

**Methods requirements (6 semester hours)**
- Plan II: Professional/Practicum
- COM 548 Seminar in Rhetorical Criticism or approved methods course, and an approved professionally applied course: COM 590 or COM 598
Approved electives (12-15 semester hours)
To be determined with one's academic advisor.

Plan I: Thesis option, which includes 6 hours of thesis research (COM 599). In addition to completing the courses specified above and electives stipulated by their plans of study, students who choose Plan I must successfully complete a master's thesis, orally defend that thesis, and have the thesis accepted by the Graduate School.

Plan II: Nonthesis Options, which include 6 hours of electives in the department. All students who choose Plan II must complete a minimum of 30 hours of graduate coursework, including the courses specified above and others stipulated by their approved plans of study, and give a departmental colloquium based on some aspect of their work. Students following the Plan II option have a choice of two plans:

• Academic track/comprehensive examination plan: Students who choose this plan must pass a comprehensive examination, to be taken no later than the semester in which the course requirements for the master's degree are to be completed. The examination is designed to reveal the knowledge gained by the candidate through both the core courses and the electives taken in the program, as well as the candidate's ability to express that knowledge in acceptable form. The questions will be formulated and evaluated by the comprehensive examination committee. The written part of the exam will be administered during a two-day period and shall not exceed five hours in total writing time. During this testing period, students will be relieved of all departmental and area duties and responsibilities, including class attendance. The time and place of the exam will be set and publicized by the department graduate program director. The oral part of the exam will be scheduled by the student's advisor upon successful completion of the written exam.

• Professional track/practicum plan: Students who are primarily pursuing professional interests or teaching requirements may choose this alternative plan. It provides students with an opportunity to include in their plans of study some type of practical application of their academic work. Students who choose to pursue this plan must secure permission to do so by submitting a formal practicum proposal to their academic advisors, no later than upon completion of 12 hours of graduate coursework. To complete the practicum, students need to submit a final report, for the approval of their advisors, and give a department colloquium presentation based on the practicum final report, which fulfills the comprehensive examination requirement.

Interdisciplinary Focus in Critical Media Studies
To pursue an interdisciplinary focus in Critical Media Studies, within the Master of Arts graduate degree program in Communication Studies, students must complete the following requirements.

Core requirements (18 semester hours)

Theory requirements (12 semester hours)
COM 541 Contemporary Rhetorical Theory or CIS 605
COM 561 Human Communication Theory or MC 550
TCF 553 Seminar in Telecommunication
COM 513, COM 515, COM 525, COM 569, or approved equivalent

Methods requirements (6 semester hours)
Plan I Thesis or Plan II: Academic/Comprehensive Examination
COM 548 Seminar in Rhetorical Criticism
MC 550, or approved methods, such as BER 631, LS 502, MC 581

Methods requirements (6 semester hours)
Plan II: Practicum
COM 548 Seminar in Rhetorical Criticism or MC 550, and
An approved professionally applied course, either COM 590 or COM 598
Approved electives (12 semester hours, minimum)
To be determined with one's academic advisor, from COM or TCF courses.

The residence requirement for the master’s degree is a minimum of two semesters. The application for Admission to Candidacy for the Master's Degree should be made after completing a minimum of 12 semester hours. Each graduate student must first apply to the graduate program director for the Department of Communication Studies for admission to candidacy. The graduate program director will certify that the candidate has fulfilled the grade requirements and that undergraduate deficiencies have been or are in the process of being removed. The graduate program director will refer the names of students fulfilling these requirements to the faculty for approval of admission to candidacy.

Additional residency, candidacy and all degree requirement information is in the Degree Requirements section of this catalog.
The Department of Journalism offers the Master of Arts degree with a major in journalism. Students work closely with a faculty dedicated to the principles and practices of sound journalism and scholarly inquiry. The program offers two plans:

- Individuals who seek in-depth knowledge and mastery of one or more of the subfields and methodologies of journalism — for example, communication history, communication law, communication theory and methods. These individuals typically follow Plan I (see below) and go on to pursue doctorates. Those with significant experience in the journalism field may teach without the Ph.D. degree.

- Individuals who seek to work professionally in writing, editing, visual journalism and/or digital journalism, and who wish to develop conceptual knowledge of the field, as well as critical-thinking and problem-solving skills. These students typically follow Plan II (see below).

The program serves both recent BA recipients, whether in journalism/mass communication or other fields, and professionals seeking to deepen their knowledge.

Admission Requirements

Admission to graduate work in the Department of Journalism requires a 3.0 or higher undergraduate grade point average (on a 4.0 scale) and a score of at least 1000 on the Graduate Record Examination general test. Applicants not meeting these criteria may be admitted under conditional status if the department’s faculty agrees the student is likely to succeed in the program. However, conditionally admitted students are not eligible for university funding and are required to maintain at least a 3.0 GPA the first semester. The department requires a score of 4.5 on the written portion of the GRE as well. The GRE must have been taken within the five years prior to application.

In addition to the online application, applicants must submit other documents to the UA graduate school, including undergraduate transcripts and a statement of purpose addressing how the degree will advance the applicant’s professional and educational goals. Applicants should also solicit three letters of recommendation, which may be submitted online to the UA graduate school or sent as hard copies to the Journalism Department’s graduate coordinator. Applicants should send a resume to the department’s graduate coordinator, and they may also submit examples of journalistic to the coordinator — e.g., stories, photos or multimedia, via hard copy, disk or website link.

The department faculty may require up to 9 hours of additional coursework for applicants lacking undergraduate classes related to the professional values and competencies that are central to the master's program.

The application deadline is March 31, but applicants are encouraged to apply by the end of January in order to be considered fully for university funding (assistantships or fellowships). Additional information is in the Admission Criteria section of this catalog.

Degree Requirements

Each student entering the graduate program in journalism must complete 31 semester hours of credit, under Plan I or Plan II. Requirements for each plan are as follows:

Plan I, Master's Thesis
Required courses
JN 500 Orientation to Graduate Studies 1
MC 551 Seminar in Communication Theory 3
MC 550 Communication Research Methods 3
JN 562 Contemporary Issues 3
JN 563 History of Journalism and the First Amendment 3
JN 599 Thesis Research 6
Electives 12
Total semester hours 31
Plan II, Master's Project
Required courses
JN 500 Orientation to Graduate Studies 1
JN 550 Communication Research Methods 3
JN 551 Seminar in Communication Theory 3
JN 562 Contemporary Issues 3
JN 563 History of Journalism and the First Amendment 3
Journalism Cognate 12
General elective 3
JN 597 Master's Project 3
Total semester hours 31

All Students must enroll in JN 500 Orientation to Graduate Studies their first semester.

Initially, the department’s graduate coordinator will serve as the student’s adviser. The coordinator will assess students’ undergraduate transcripts and will help the student establish a plan for cognate or elective courses that will provide students with core values and competencies for the program.

At the completion of 12 credit hours, the student should select a committee chair. The chair will serve as the student’s academic adviser and will help the student select members for the thesis or project committee. The thesis committee must comprise two faculty members from the journalism department and at least one member from outside the department. The project committee must comprise at least two faculty members from the department – no outside member is required. An Appointment or Change of Master's Thesis Committee form must be submitted to the Graduate School for the dean's approval of the committee members.

The student is required to pass a comprehensive examination in conjunction with an oral defense of the thesis or master's project. Students are questioned on their thesis or project topic, and on core areas of their course of study. For the student to pass the examination, committee members must be satisfied the student has gained sufficient knowledge in core areas of the curriculum and has mastered a specific area of knowledge.

The following applies to students pursuing a master's degree under Plan II

Plan II students produce a project rather than a thesis. The successful master's project demonstrates mastery of a knowledge area as well as the ability to apply this knowledge through the practice of journalism. The typical project will include (1) an academic component in which the student systematically analyzes some aspect of journalism or its consequences and (2) a rigorous, thorough journalistic work, such as an in-depth multimedia story. The academic analysis should shape the decisions the student makes about the journalistic work. For example, a student may analyze past news coverage of a particular topic, noting shortcomings in the reporting, and then use findings from this analysis to shape the reporting for the student's own in-depth news story.

Prior to the final semester, the student should propose the project in writing to the committee chair, describing how the project will be accomplished and laying out a specific time table. The approved plan will be shared with the other committee member(s).
Students present the project to fellow students, committee faculty and news professionals as part of a comprehensive oral examination. In conjunction with this exam, each student under Plan II will present a portfolio of the student's best work while enrolled in the program. The final project report should be the first item in the portfolio.

At the time of the student's comprehensive exam, each student under Plan II will present a portfolio of the student's best work while enrolled in the program. The master's project, which includes the academic study and the journalistic work, should be the first item in the portfolio.

Plan II also includes a one-year option involving a professional immersion experience in a newsroom. In recent years this option has been administered in conjunction with the Anniston (Ala.) Star newspaper. Admission criteria and core curriculum requirements are identical to the traditional Plan II option.

Under either plan the application for Admission to Candidacy for the Master's Degree should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama. It must be approved by the time of registration for the semester in which requirements for the degree are completed. Additional information may be found in the Degree Requirements section of this catalog.
OUR VISION

As a student-centered community of scholars, we engage partners to expand opportunities to create, manage, and use information effectively.

OUR MISSION

The School of Library and Information Studies develops creative and critical thinkers and leaders for the information world through a supportive teaching and learning environment, collaborative research, and community engagement.

OUR GOAL FOR 2015

Our School will be the “school of choice” in the region and beyond, with faculty recognized as leaders in sponsored research, scholarship, and in teaching, with renewed and focused master’s and doctoral programs.

SLIS STRATEGIC PLAN

Facilities.

The School classrooms, faculty offices and shared spaces are housed on the fifth floor of the Amelia Gayle Gorgas Library in the heart of the campus. Student spaces provide desktop computing, printing, laptop workstations, individual and group work spaces, professional resources and a collection of children and youth literature. A student lounge is conveniently located for relaxation and refreshment.

Academic Common Market (ACM).

The School of Library and Information Studies participates in the ACM, an agreement among selected Southern states to share academic programs at in-state tuition rates. Residents of the states of Arkansas, Delaware, Virginia, and West Virginia may make an ACM application to attend the MLIS program. If accepted, The University of Alabama will pay the out-of-state portion of the student’s tuition. Residents of Georgia, Kentucky, Louisiana, Mississippi, South Carolina, and Tennessee may apply to the ACM to attend the MFA in book arts program, also with UA’s paying the out-of-state portion of tuition. Background information on the ACM, a list with the contact information for each state’s ACM Coordinator, and an online application to the UA Academic Common Market.

A number of departmental assistantships (which not only pay a stipend but also cover some out-of-state fees), as well as a number of scholarships, are available each academic year. For information Contact the Director of the School of Library and Information Studies.

MASTER OF LIBRARY AND INFORMATION STUDIES (MLIS) PROGRAM

Regular Admission Requirements

An applicant whose credentials meet the following minimum requirements may be considered for regular admission:

- a grade point average of at least 3.0 overall or 3.0 for the last 60 semester hours in a degree program, based on a 4.0 system
- an acceptable score on the entrance examination (minimum test scores: general test of the GRE verbal and quantitative=300 or MAT=50th percentile)

Not every student whose credentials meet the stated quantitative standards is admitted.

Information about the GRE is available from the Educational Testing Service, Princeton, NJ 08540. The MAT is given by the testing service of most colleges and universities and may be
taken by appointment. Applicants should plan well in advance so that examination results are available when needed to support an application for admission. Braille editions of the GRE and the MAT can be obtained from The University of Alabama, Test Service, Box 870108, Tuscaloosa, AL 35487-0108.

Application instructions may be obtained from the Graduate School's website.

Conditional Admission Requirements

An applicant whose credentials do not meet the stated requirements may be considered for conditional admission if the following minimum requirement is satisfied:

• a grade point average of at least 2.5 overall and a GRE or MAT score acceptable to the School and the Graduate School

A graduate student admitted conditionally removes the condition by earning an average of "B" or better for the first 12 semester hours of graduate-level work completed and by satisfying any other conditions specified by the School at the time of admission. If the 12 hours are completed in a term in which the total credits exceed 12, the evaluation is made on the basis of all graduate-level work completed at the end of that term of enrollment. Failure to remove the condition within the first 12 hours of graduate work will result in the student's being dropped from the program. A student who satisfies the condition automatically assumes the status of a regularly admitted graduate student.

Nondegree Admission Requirements

A student may be admitted as a nondegree student if that person has either a 3.0 undergraduate GPA or an acceptable test score: 50th percentile on the MAT or 300 on the GRE general test. No more than 12 hours may be taken as a nondegree student and applied to a degree.

See the Admission Criteria section of this catalog for more information on admission to all programs.

Degree Requirements

Candidates for the MLIS degree must earn a minimum of 36 semester hours of credit, completing all work with a grade average of "B" or better. A thesis is not required. All MLIS students must complete, as part of the minimum 36 hours, the following 18 hours of required courses:

- **LS 500** Organization of Information
- **LS 501** Introduction to Library and Information Studies
- **LS 502** Research Methods
- **LS 507** Information Sources and Services
- **LS 560** Information Technologies

And one of the following:

- **LS 508** Administration and Management
- **LS 530** Public Libraries
- **LS 531** Academic Libraries
- **LS 532** School Media Centers
- **LS 533** Special Libraries and Information Centers

Thesis and Coursework Plans

Two plans are offered for the master's degree:

*Plan I: Thesis.*
Candidates for the master’s degree under the thesis plan must earn a minimum of thirty-six hours of credit, including fifteen hours of required courses, a three-hour required management and administration course, and six hours of thesis credit (LS 599); no more than six hours of thesis credit may be counted toward the degree.

Intent to elect the thesis option must be formally declared within the first nine hours of enrollment in graduate LIS courses. The declaration of intent must indicate the subject area of the research and the faculty member who has agreed to direct the thesis.

The student must identify a three-person thesis committee, to consist of at least two full-time SLIS faculty members, at least one of whom must be must be a full member of the graduate faculty; a third committee member may be a faculty member from another department of the University, a faculty member from another institution, or a well-qualified practitioner. All committee members must hold appropriate Graduate Faculty status.

The student must obtain committee approval for a prospectus for the thesis project prior to enrolling in thesis credit; a formal defense of the prospectus will constitute the final examination for the MLIS degree.

The student must complete and successfully defend a thesis that meets the requirements established by the Graduate School. The thesis defense shall be made orally before the student’s thesis committee and will be open to the public.

**Plan II: Coursework.**

Candidates for the master’s degree under the coursework plan must earn a minimum of thirty-six hours of credit, including fifteen hours of required courses and a three-hour required management and administration course.

**Transfer of Credit and Credit for Non-Letter Graded Courses**

Graduate credit may be transferred from another regionally accredited university or may be elected from the offerings of other departments. Thesis credit cannot be transferred from another university. No more than nine hours of credit can be applied toward the MLIS for any combination of graduate courses taken outside SLIS, directed research courses, internships, and thesis credit. These hours may be combined as follows:

**Plan I: Thesis.**

**Six hours** of thesis credit and three hours of credit for directed research course or internship; or:

**Six hours** of thesis credit and three hours of approved credit for graduate work taken outside SLIS.

**Plan II: Coursework.**

**Six hours** of approved credit for graduate work taken outside SLIS and three hours of credit for a directed research course or internship; or:

**Six hours** of credit for any combination of directed research courses and internships and three hours of approved credit for graduate work taken outside SLIS.

**Time Limit**

All requirements for the master's degree must be completed during the six years (18 consecutive semesters) immediately preceding the date on which the degree is to be awarded.

**Admission to Candidacy**
Admission to the Graduate School does not imply admission of a student to candidacy for a degree. Admission to candidacy is contingent upon the recommendation of the student's department and the approval of the graduate dean, after the student has met the formal requirements for candidacy listed below and demonstrated sufficient preparation to pursue the graduate study and research required for the degree sought.

The application for Admission to Candidacy for the Master's Degree should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama. It must be approved by the time of registration for the semester in which requirements for the degree are completed. Additional information is in the Degree Requirements section of this catalog.

**Thesis**

A thesis evidencing research capacity, independent thought, and the ability to interpret materials is required of all master's degree candidates who pursue Plan I: Thesis. The subject chosen must be related to library and information studies and must be approved by the student’s thesis director, the student’s thesis committee, and the SLIS Director.

The thesis committee must include three individuals, including at least two full-time SLIS faculty members, at least one of whom must be must be a full member of the graduate faculty; a third committee member may be a faculty member from another department of the University, a faculty member from another institution, or a well-qualified practitioner. All committee members must hold appropriate Graduate Faculty status.

The candidate must give members of the examining committee a minimum of two weeks to read the thesis before the date of the final oral examination. A final oral examination is required of all students completing a thesis. All members of the thesis committee must be members of the UA graduate faculty and must attend the final oral examination unless there are extraordinary circumstances warranting the graduate dean's approval of the absence prior to the defense meeting.

Theses must comply with the regulations set out in A Student Guide to Preparing Electronic Theses and Dissertations, available on the Graduate School's website. Approval of the thesis by the graduate dean is necessary before graduation.

The thesis should be completed, if possible, while the student is in residence at the University. To request permission to complete a thesis in absentia, the student must, before leaving the University, submit a satisfactory outline of the thesis, as well as evidence that adequate facilities are available where the work will be done, to the head of the student’s major department.

**Protection of Human Subjects for Research**

Scientific research involving human subjects has produced substantial benefits for society, but it also has posed troubling ethical questions. The mission of the University's Institutional Review Board for Protection of Human Subjects is to ensure that research involving human subjects is conducted ethically. University and federal policies require that review and approval to use human subjects in research precede the research. In the case of thesis research that involves the use of human subjects, the principal investigator – normally the student – is responsible for contacting the college Human Research Review Committee to obtain approval for the planned research. Both the student and the thesis chair are responsible for completing Institutional Review Board training; guidelines for training can be found at [http://osp.ua.edu/site/irb_training.html](http://osp.ua.edu/site/irb_training.html).

The request form for IRB approval can be accessed from [http://osp.ua.edu/](http://osp.ua.edu/)

**Application for Graduation**

Each candidate for a master's degree must apply for graduation through the Office of the Graduate School during the first week of the term in which requirements for the degree are to
be completed. The form "Application for Degree" is required for this purpose, and must be completed online.

**Student Learning Outcomes for the MLIS**

**Teaching.** Upon completing the SLIS MLIS program, all students should:

- have acquired a basic core of knowledge in the field: the creation and production, organization and access, selection and evaluation, preservation, dissemination and use of information
- understand the nature of professional ethics, display a committed professional attitude, value the role of professional associations, and be committed to individual professional development
- understand the opportunities and challenges of a variety of information settings, their functions, and the users they serve and be able to approach the design and management of services and systems
- value teaching and service as ways to advance the field
- have knowledge of current research, an understanding of research processes and methods, and an ability to analyze and critically evaluate research and apply it to professional duties
- understand the significance of concepts and contributions of other disciplines to library and information studies and the importance of library and information studies theories, principles, and concepts to other disciplines
- be aware of and sensitive to the impact of information practices, services, and programs on diverse, underserved and multicultural communities
- understand the appropriate technologies and their applications within particular contexts for the organization, retrieval, management, and dissemination of information
- be able to communicate cogently, clearly, and persuasively
- support the development and improvement of library and information services in general with special focus on the people of Alabama and the southeastern United States

**Research and Creative Activities.** The SLIS faculty:

- publish papers and reports in journals, monographs, and other publications devoted to librarianship, information science, and related disciplines
- present the results of research, inquiry, and creative endeavors to peers at professional meetings and exhibitions
- undertake applied research projects including consulting assignments that augment and advance knowledge

**Service.** The SLIS faculty and staff provide advice and assistance to libraries and information centers that help them to enhance the services they provide.

- The SLIS faculty and staff undertake consulting assignments.
- SLIS provides opportunities for faculty and students to participate in professional associations, to promote the profession, and to assume leadership and policy-making roles.
- SLIS faculty, staff, and students participate in the work of the University and the School through service on committees and working groups.

**Class A Library-Media Certification**

A candidate for the MLIS degree who seeks an Alabama Class A Library-Media Certificate must first have fulfilled the requirements for a teaching certificate at the baccalaureate level. Two years of successful teaching must also have been completed prior to receiving Class A certification as a library-media specialist. Certification may also be granted by the Alabama State Department of Education to a person who holds an MLIS degree, completes two years of successful teaching as a school library media specialist, and is recommended by the principal or superintendent who supervised the two years of work.
In addition to completing an approved program of studies, the candidate is required to earn a satisfactory score on a comprehensive examination administered by the School of Library and Information Studies. The approved program of studies for certification is as follows:

**Instructional support area**
- **LS 500** Organization of Information 3
- **LS 501** Introduction to Library and Information Studies 3
- **LS 504** Media Production and Utilization 3
- **LS 507** Information Sources and Services 3
- **LS 532** School Media Centers 3
- **LS 542** Instructional Design and Development 3
- **LS 560** Information Technologies 3
- **LS 572** Internship in School Media Centers (requires a minimum of 300 clock hours) 3

**Foundation of professional studies**
Three semester hours are to be earned in courses that meet the foundation of professional studies requirement, as defined by the granting institution. Students who have not already completed a survey course in special education must also take **SPE 500** Introduction to Exceptional Children and Youth (or its equivalent). Such students must complete a minimum of 39 semester hours for the degree. 3-6

**Research**
- **LS 502** Research Methods 3

**Electives**
- **LS 521** Materials and Services for Children 3
- **LS 522** Materials and Services for Young Adults 3

**Total semester hours** 36-39

If courses equivalent to any of these required courses have been taken previously, substitutions may be made, with the approval of a faculty advisor.

The application for Admission to Candidacy for the Master's Degree should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama. It must be approved by the time of registration for the semester in which requirements for the degree are completed. Additional information is in the Degree Requirements section of this catalog.

**MASTER OF FINE ARTS (MFA) PROGRAM IN THE BOOK ARTS**

The program leading to the MFA in the book arts degree is a 60-credit-hour program of study comprised of four areas: printing and publishing, bookbinding, papermaking, and the history of the book, with a program emphasis on the book as an integrated unit. Students may pursue one of three concentrations: printing and publishing; bookbinding; or a fusion of the two, focusing on the whole book. Emphasis is placed on developing craft skills based on historical principles and techniques, as well as artistic expression. The MFA in the book arts program develops professional-level book artists who have well-honed technical knowledge of the various facets of contemporary bookmaking, an intimate personal involvement with their specific areas of interest, and an understanding of the role of the book in society.

**Admission Requirements**

Applicants may submit a score for either the general portion of the Graduate Record Examination or the Miller Analogies Test in support of the application for admission. Admission requirements for the MFA program in the book arts are consistent with those for the MLIS degree program. A portfolio is not required; however, students are encouraged to submit one. Additional information is in the Admission Criteria section of this catalog.
Degree Requirements

Candidates for the MFA degree in the book arts must earn a minimum of 60 semester hours of credit, including at least 6 hours in the history of the book and 3 hours in a historical/theoretical course appropriate to the goals of the individual student; at least 33 hours in the book arts studio; and 12–18 hours of electives within or outside the book arts program. All coursework must be completed with a grade average of "B" or better. All students enter the program in the fall and spend four semesters in residence.

All MFA students must complete, as part of the 60 hours, the following required courses:

- **BA 520** Printing I—Elements of Printing 3
- **BA 521** Printing II—Printing and Typography 3
- **BA 530** Binding I—Elements of Binding 3
- **BA 531** Binding II—An Exploration of the Paper- and Cloth-Bound Book 3
- **CIS 655** History of the Book: Book as Artifact 3
- **CIS 654** History of the Book: Print Culture and Society 3
- **BA 592** Graduate Symposium 3
- **BA 599** Creative Project Production, Thesis, and Exhibition 9–12

**NOTE:** No more than 20 percent of courses required for a degree may be taken on a pass/fail basis, and as with all graduate programs at the University, at least 75% of courses must be completed with a letter grade of either A or B.

Those students concentrating in printing and publishing also must complete the following:

- **BA 522** Printing III—Printing and Parallel Editions 6
- **BA 523** Printing IV—Printing and Publishing 6

Those students concentrating in bookbinding must also complete the following:

- **BA 532** Binding III—Leather Binding 6
- **BA 533** Binding IV—Binding Exploration 6

Those students concentrating on the whole book must also complete advanced coursework in both printing and binding. The configurations of advanced courses will be determined through discussion with the book arts faculty. Students who are not enrolled in the MFA program and who wish to take book arts classes must obtain permission from the instructor before enrolling.

The application for **Admission to Candidacy for the Master's Degree** should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama. It must be approved by the time of registration for the semester in which requirements for the degree are completed. Additional information is in the **Degree Requirements** section of this catalog.
The master of arts degree program in telecommunication and film focuses on the electronic media and the cinema as informative, influential, and meaning-producing forms. The program emphasizes the study of these media in terms of law and policy, technological systems, economic and industrial infrastructures, news and public affairs, management leadership, individual and societal effects, history, and cultural criticism.

Implementation. The principal goals of the program are to develop students' analytical and interpretive skills through thoughtful and informed consideration of the possibilities, limitations, and responsibilities of the telecommunication and film media. Our students study television, film, the Internet, and other media systems in an attempt to understand how they work and what influences they have upon individuals, societies, and the global community.

Specialized application of studies may culminate in a thesis or master's project specific to one of the following: management leadership; law and policy; news and public affairs analysis; telecommunication and society; cinema and television critical studies; or another emphasis in which the student's particular interests match appropriately qualified faculty members', subject to the availability of resources necessary for the proposed study.

Courses are selected in consultation with the student's graduate advisor and must be approved by the student's program committee.

Admission Requirements

In addition to meeting all admission requirements of The University of Alabama Graduate School, the department requires applicants to provide at least two letters of reference or statements from academic sources who can attest to the applicant's potential for graduate work. We encourage applicants to visit the department and become better acquainted with the program, the faculty, and the current students.

Degree Requirements

Plan I, master's thesis. Students who write a master's thesis must complete a minimum of 30 graduate credits, including the courses specified below and others stipulated by the student's program committee. In addition, the student must do all of the following:

- pass a comprehensive written exam (typically eight hours long) and orally defend the answers
- successfully complete a master's thesis (enrolling in TCF 599 Thesis Research for at least 6 credit hours) and orally defend that thesis

Plan II, nonthesis options. Students who choose Plan II must complete a minimum of 30 hours of graduate coursework, including the courses specified below and others stipulated by the student's program committee. Students following the nonthesis option have two plans from which to choose:

Plan II, Project: The student must do all of the following:

- pass a comprehensive written exam (typically eight hours long) and orally defend the answers
- successfully complete a master's project (enrolling in TCF 598 Master's Research Project for 3 credit hours) and orally defend that project
A student choosing this option will create a project appropriate to his or her interests and approved by his or her program committee. Such projects always will include written justification for the undertaking, an explanation of the procedures involved, and a clear rationale for each decision. Substantive documentation to support observations and conclusions is expected.

**Plan II, Independent Research:** The student must do all of the following:

- pass a comprehensive written exam that is substantially longer than those taken in the other options (typically 12–16 hours long) and orally defend the answers
- successfully complete individual study with a faculty member (enrolling in TCF 597 Independent Research for 3 credit hours).

**Course requirements.** All College of Communication and Information Sciences master's degree candidates must complete MC 550 Communication Research Methods and MC 551 Seminar in Communication Theory. Master's degree candidates in telecommunication and film must also complete TCF 553 Seminar in Telecommunication or TCF 577 Cinema Seminar.

Remaining coursework will consist of thesis research (at least 6 hours) and electives (15 hours) or master's project research/study (3 hours) and electives (18 hours), or independent research (3 hours) and electives (18 hours). The student may take no more than 9 hours of electives numbered TCF 500-549; with approval, up to 6 hours of electives outside the department may be taken (MC courses are not included in these 6 hours). The student must develop a curriculum plan, which must be approved by the student's program committee. Sample curriculum plans might include the following courses:

<table>
<thead>
<tr>
<th>Management leadership</th>
<th>Semester hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCF 545 Telecommunication Media Management</td>
<td>3</td>
</tr>
<tr>
<td>TCF 547 Telecommunication History and Systems</td>
<td>3</td>
</tr>
<tr>
<td>TCF 553 Seminar in Telecommunication</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Law and policy</th>
<th>Semester hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC 501 Mass Media Law and Regulation</td>
<td>3</td>
</tr>
<tr>
<td>TCF 533 Seminar in Telecommunication</td>
<td>3</td>
</tr>
<tr>
<td>TCF 547 Telecommunication History and Systems</td>
<td>3</td>
</tr>
<tr>
<td>TCF 548 Telecommunication Policy and Law</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>News and public affairs analysis</th>
<th>Semester hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCF 533 Broadcast News Analysis</td>
<td>3</td>
</tr>
<tr>
<td>TCF 541 The Documentary Form</td>
<td>3</td>
</tr>
<tr>
<td>TCF 553 Seminar in Telecommunication</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Telecommunication and society</th>
<th>Semester hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCF 520 Telecommunication Effects</td>
<td>3</td>
</tr>
<tr>
<td>TCF 553 Seminar in Telecommunication</td>
<td>3</td>
</tr>
<tr>
<td>MC 501 Mass Media Law &amp; Regulation</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cinema and television critical studies</th>
<th>Semester hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCF 511 Seminar in Critical Studies in Television</td>
<td>3</td>
</tr>
<tr>
<td>TCF 540 Seminar in American Cinema</td>
<td>3</td>
</tr>
<tr>
<td>TCF 541 The Documentary Form</td>
<td>3</td>
</tr>
<tr>
<td>TCF 577 Cinema Seminar</td>
<td>3</td>
</tr>
</tbody>
</table>

Admission to the Graduate School does not imply admission of a student to candidacy for a degree. Admission to candidacy is contingent upon the recommendation of the student's department and the approval of the graduate dean.

Under both, Plan I and Plan II, the application for **Admission to Candidacy for the Master's Degree** should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama. It must be approved by the time of registration for the
semester in which requirements for the degree are completed. Additional details on Admission
to Candidacy and all other degree requirements is in the Degree Requirements section of
this catalog.
The college-wide doctor of philosophy degree in the College of Communication and Information Sciences is designed to:

- prepare communication scholars for positions of leadership in education, public service, the media, libraries, information-management positions, and other communication-related fields
- add to a student's usable body of knowledge in a chosen area of specialization within the field of communication and information sciences
- develop each student's research, teaching, and professional capabilities
- promote scholarly achievement and advancement of knowledge in the communication and information science disciplines, through basic and applied research

Specializations

- Communication Studies
- Information Studies
- Cultural, Critical, and Rhetorical Studies

Admission Requirements for the PhD Program

Applicants to the doctoral program must meet the admission requirements of the Graduate School (see Admission Criteria) of The University of Alabama and those stated below. Consideration for acceptance is based on having met these requirements, and on evidence of the capacity for success in communication studies at the doctoral level, in the form of clarity of expression and goals in the statement of purpose; letters from professors who can attest to an applicant's potential for doctoral-level work; record of prior academic study (including the nature and academic standing of courses of study already completed and grades earned); satisfactory scores on the Graduate Record Examination; and other information that may illustrate ability, maturity, commitment, and sense of purpose or that may otherwise indicate an applicant's potential to complete doctoral studies.

Normally, an applicant will have completed requirements for a master's degree in the communication field or in library and information studies. Consideration will be given to individuals with advanced degrees in other fields if they can make clear cases showing how their previous graduate work would apply to doctoral study in communication and information sciences. Admission for study in master's degree programs offered in the College of Communication and Information Sciences does not imply eligibility to work toward the doctoral degree. Admission to doctoral study in the College of Communication and Information Sciences requires completion of a separate application through the Graduate School. An applicant whose credentials meet the following minimum requirements may be considered for admission to the PhD program in communication:

- an undergraduate grade point average of 3.0 or higher overall (based on a 4.0 system) or a 3.0 or higher average for the last 60 semester hours of undergraduate study, and a graduate-level grade point average of at least 3.0
- a combined score of 1100 on the verbal and quantitative portions of the Graduate Record Examination general test, with no less than 400 on either the verbal or quantitative portion of the examination, and 4.5 on the written portion of the GRE

Foreign applicants must score at least 600 on the Test of English as a Foreign Language (TOEFL) to be considered for admission.
An applicant who does not meet these requirements may be considered for conditional admission to the program if the following conditions are satisfied: an undergraduate grade point average of at least 3.0 overall (based on a 4.0 system) and a combined score of 1000 or higher on the verbal and quantitative portions of the Graduate Record Examination general test, with no less than 400 on either the verbal or quantitative portion of the examination. A student admitted conditionally to the program removes the condition by earning a grade point average of 3.0 or better during the first 12 semester hours of graduate work attempted after admission to the doctoral program, and by satisfying any other conditions specified by the College of Communication and Information Sciences Graduate Studies Committee. If the 12 hours are completed in a term in which the total credits exceed 12, the evaluation is made on the basis of all graduate work completed at the end of that term of enrollment.

A student who removes the condition immediately assumes the status of a regularly admitted graduate student. Failure to remove the condition within the first 12 hours of graduate work will result in the student's dismissal from the program. No student will be admitted to the program on any basis other than the two described above (regular and conditional admission to the PhD program in communication and information sciences).

Admission of a foreign student to the program may be contingent upon the successful completion of specified coursework in the English language offered by the English Language Institute of The University of Alabama. In such cases, the criteria for successful completion include earning at least a “B” grade in each course. Stipulated courses in the English Language Institute must be completed before the student is permitted to begin a course of study in the doctoral program.

Students who are admitted contingent upon the completion of preliminary courses specified by the Admissions Committee must complete these prerequisites during the first semester of study in the program if at all possible. Students will not be permitted to continue beyond the second semester of enrollment without having successfully completed the prescribed prerequisites. The prerequisite courses do not carry graduate credit.

The student's advisor and/or Program Advisory Committee may also recommend specific, preliminary, noncredit coursework to be completed during the first or second semester of study if deficiencies in a specific area are determined. These requirements must be approved by the associate dean for graduate studies of the College of Communication and Information Sciences.

Additional information is in the Admission Criteria section of this catalog.

General Requirements for the PhD Degree

Coursework

1. **Number of semester hours required in the program:** 48–60 hours as determined by a student's program committee. An additional 24 hours of dissertation research will be taken, usually following admission to candidacy.

2. **Specialization:** 18–30 hours are required in the student's area of specialization, from one of the following three specializations: mass communication, information studies, or cultural, critical, and rhetorical studies. The student's Program Advisory Committee determines which specific courses he or she must take to satisfy program and research requirements.

3. **Cognate:** 9–15 hours are required in the student's cognate area, which has to be approved by the student's Program Advisory Committee. We recommend that students take their cognate in courses outside the College of Communication and Information Sciences. If the cognate is taken within the College, it must be in an area outside the specialization.

4. **Core requirements (courses required of every student)**
• **6 hours in theory.** The student, in conjunction with the Program Advisory Committee, chooses two theory courses from the following, one of which must be in the student’s area of specialization):
  
  CIS 604 Mass Communication Theory  
  CIS 605 Cultural, Critical, and Rhetorical Theory  
  CIS 606 Knowledge and Information Theory  
  CIS 607 Theory Construction and Epistemology

• **3 hours in research methods:**
  
  CIS 603 Communication Research Methods  

  Additionally, the student must demonstrate proficiency in the research methodology to be used in the dissertation through coursework beyond CIS 603 before taking the comprehensive examinations. Students taking coursework that requires quantitative research and/or doing a dissertation using quantitative research must complete at least one statistics course.

5. **Electives (additional courses): 0–21 hours.** These courses may be in the specialization, cognate, or other areas that the student's Program Advisory Committee may stipulate or approve.

<table>
<thead>
<tr>
<th>Area</th>
<th>Semester hours</th>
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</thead>
<tbody>
<tr>
<td>Total program</td>
<td>48–60</td>
</tr>
<tr>
<td>Specialization</td>
<td>18–30</td>
</tr>
<tr>
<td>Cognate</td>
<td>9–15</td>
</tr>
<tr>
<td>Core</td>
<td>12</td>
</tr>
<tr>
<td>Additional/elective</td>
<td>0–21</td>
</tr>
</tbody>
</table>

**Also (Graduate School requirements):**

<table>
<thead>
<tr>
<th>Area</th>
<th>Semester hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissertation</td>
<td>24</td>
</tr>
</tbody>
</table>

6. **Other requirements**

• A minimum of 36 hours of coursework must be completed after enrollment in the CIS doctoral program.

• A minimum of 24 hours of coursework must be at the 600 level. The remainder of hours of approved graduate course credit must be at the 500 or 600 level. No slash-listed 400/500-level course may be taken in the doctoral degree program. A maximum of 6 hours of 400- or 400/500-level credit may be transferred if completed as part of a master's degree program.

• Each student must complete a minimum of four 600-level seminars from the College of Communication & Information Sciences curriculum.

• Up to 12 of these 36 hours may be transferred from a student's masters program if approved by the student's Program Advisory Committee and the associate dean for graduate studies. Credits so approved must have been earned within a period of no more than six years prior to admission.

**Required Plan of Study.** By the time each doctoral student has completed 30 graduate semester hours of UA and/or transfer work toward the degree, the student must have a doctoral **Plan of Study** approved by the director of the Communication and Information Sciences doctoral program and by the dean of the Graduate School. Failure to obtain approval of the Plan of Study by the graduate dean by the completion of 30 hours may result in the student's having a hold placed on future registrations. The Plan of Study is available at the Office for Graduate Studies in CIS.

http://graduate.ua.edu/catalog/20700.html
Students admitted to the doctoral program may be required to complete additional coursework to be prepared for doctoral-level (600-level) study and research in communication and information sciences, at the discretion of the Program Advisory Committee and the CIS associate dean for graduate studies.

All degree requirements must be completed within seven years after first enrollment in the program. Entering doctoral students with incomplete master's theses must complete these during the first year of doctoral study. Students must provide official transcripts of their master's degree work as evidence that their degrees have been granted. If a student fails to provide the transcript, the College may refuse to administer the PhD preliminary examination and/or may withdraw financial support; the Graduate School also would nullify the doctoral program admission.

**Scholastic requirements.** A student must maintain cumulative grade point average of at least 3.00 on a 4.00 scale for graduate courses undertaken following admission to the doctoral program. A doctoral student whose grade point average falls below 3.00 at any time after 6 semester hours have been completed will be placed on academic warning by the Graduate School and the College of Communication and Information Sciences.

- A student on academic warning will not be permitted to apply for admission to candidacy and may not hold an assistantship.
- Warning status must be removed (by raising the overall average to 3.00 or higher) within the next 9 hours of graduate work following the period of warning. Failure to remove the warning status will result in the student's suspension from the Graduate School and the program.
- Earning a “C” grade at any time will automatically place a student on academic warning within the College.
- A grade of “I” (Incomplete) is evaluated as an “F” in computing GPAs, and such grades must be removed within four weeks of the next term of enrollment.
- A student who earns a grade below “B” in more than two courses will be dropped from the program.

Students who are dropped from the program may petition the College of Communication and Information Sciences Graduate Studies Committee for readmission. The committee may in turn make a special request to the dean of the Graduate School for approval of the student’s readmission.

**Residency requirement.** The minimum period in which the doctoral degree can be earned is three full academic years of graduate study. The student must spend an academic year in continuous residence on the campus of The University of Alabama as a full-time student (9 –12 hours of coursework per semester) or, if specifically approved by the faculty concerned, one full summer consisting of two terms, preceded or followed by one regular, full-time semester. Only non-dissertation coursework can satisfy this requirement; dissertation research cannot be used. Students must complete their residency requirement before admission to candidacy.

Preliminary examination. A preliminary examination is required of all doctoral candidates. The examination is given after all required course work and other work prescribed by the student’s Program Advisory Committee has been completed. The examination must be completed at least three months before the degree is awarded.

The student demonstrates, through written and oral examinations, a capacity to understand, synthesize, and apply communication theory and research techniques, as well as demonstrate knowledge of the pertinent literature, issues, and recent advances in the student's area of specialization and cognate area of study. In other words, the examination must cover (1) the communication theory core, (2) the research methodology core, (3) the student's area of specialization, and (4) cognate area. The written examination is administered by the student's Program Advisory Committee, which may call on other faculty members associated with the student's coursework for assistance in preparing the examination. Sixteen hours are set aside for the examination—four hours for each division (theory, methods, specialization, and cognate). The examination is to be completed within a two-week period.
The oral portion of the examination is required of all students and will be scheduled as soon as possible following the completion of the written examination. Immediately following the oral examination, the examination committee will determine whether the student has passed, must perform additional work to demonstrate competency in one or more areas of the examination, or has failed the examination. When additional work is required, the examining committee may choose to administer another oral examination. In the case of a clear failure, re-examination must take place after six months and before twelve months have elapsed. Each of the four portions of the preliminary examination may be taken only twice. The examining committees will rule either pass or fail on the second examination.

**Admission to candidacy.** A student is certified by the dean of the Graduate School for admission to candidacy for the PhD in Communication & Information Sciences after meeting the following requirements:

- completion of the program of coursework and other requirements prescribed by the student's Program Advisory Committee, approved by the College of Communication and Information Sciences Office for Graduate Studies, and approved by the dean of the Graduate School on the Plan of Study and Admission to Candidacy forms
- demonstration, by passing the preliminary examination, of competence in the PhD core, research methods, the specialization, and the cognate
- a successful defense of a dissertation proposal
- approval by the Graduate School of the Admission to Candidacy for the Doctoral Degree

A department-approved **Admission to Candidacy for the Doctoral Degree** is submitted to the Graduate School as soon as possible after passing the comprehensive (preliminary) examination.

**Dissertation committee.** Following a successful completion of preliminary examinations, the candidate for the PhD in Communication and Information Sciences must form a Dissertation Committee.

The dissertation committee is composed of at least five members. The Graduate Faculty of the College of Communication and Information Sciences must be represented by at least three members. A fourth member may be from CIS or from a college or school outside the College of Communication and Information Sciences, but he or she must have graduate faculty status. A fifth member, to be appointed by the Graduate School of the University, must be a member of the Graduate Faculty in a division other than the College of Communication and Information Sciences; this so-called “Outside Member” represents the UA Graduate Faculty at large. Only full members of the Graduate Faculty may chair doctoral dissertations.

At least one committee member other than the chair must have full membership in the Graduate Faculty of the College of Communication and Information Sciences. All other members may be associate members. However, no more than one temporary member of the Graduate Faculty may serve on any given committee.

The graduate dean’s approval of the proposed dissertation committee must be obtained before significant progress is made on the dissertation—typically just before or just after the dissertation proposal meeting. For this purpose, the student submits the form for **Appointment/Change of a Doctoral Dissertation Committee.**

**Dissertation.** After successful completion of the preliminary examination, degree candidates must submit a written proposal to their dissertation committee.

The proposal describes the importance of the proposed topic, outlines the hypotheses to be evaluated, provides and overview of relevant literature, specifies the methodology to be used, and lays includes a timetable for completion of the project. The dissertation must make a significant original contribution to the field of communication and information sciences and must demonstrate the candidate's ability to report that research in writing in a clear, comprehensive, and scholarly manner.

http://graduate.ua.edu/catalog/20700.html
The student must submit the proposal, and later the dissertation, to the committee at least 14 days prior to the defense. After the proposal has been circulated among the members, the student's dissertation committee meets for the student's oral defense of the proposal. The candidate must complete the dissertation and all other degree requirements within seven years of the date of admission to the doctoral program.

**Final examination.** The candidate must present a copy of the final draft of the dissertation to each committee member at least two weeks before the scheduled date of the final examination. After the dissertation has been completed and accepted by the candidate's dissertation committee for purposes of the examination, the candidate will be given a final oral examination by the dissertation committee.

The final examination is concerned primarily with the research embodied in the dissertation and with the field in which the dissertation lies, but it may extend over the student's entire primary field of study. The final oral examination is governed by the rules of the Graduate School of The University of Alabama. All graduate faculty of the College of Communication and Information Sciences are invited to attend.

The dissertation must comply with the regulations in *A Student Guide to Preparing Electronic Theses and Dissertations*. Graduate School deadlines, including each semester's dissertation deadline, are available at the Graduate School's homepage.

As of August 15, 2009, electronic submission of theses and dissertations (ETD) is required. Consult the ETD website for details of ETD submission.

Additional information on all Degree Requirements is in an earlier section of this catalog.
8.9.1 Expedited Admission Track into the CIS Doctoral Program

Description

The Expedited Admission Track into the CIS Doctoral Program is to allow highly qualified students to be admitted into the doctoral program after they complete an undergraduate degree. Such students will begin graduate coursework in a specific Master of Arts degree program of the College and complete their graduate degree as College-wide doctoral candidates, without having to reapply for admission or to transfer credit hours from the MA program into the PhD program. In short, if admitted on the expedited track, candidates will be able to count all of their MA coursework, rather than the maximum of 12 hours, toward their doctoral degree.

Students admitted on the expedited track would be required, upon completion of 24 hours of graduate coursework, to take a 12-hour comprehensive, qualifying examination administered by their academic advisor, program committee, and two representatives of the PhD program selected by the Associate Dean for Graduate Studies. The PhD program representatives will lead the committee’s determination of the overall quality of the comprehensive exam answers. If the candidate passes the qualifying examination, he or she will be approved to continue in the CIS doctoral program. The completed 24 credit hours then also will apply toward the minimum of 48 hours of graduate course work required for the PhD. Upon completion of graduate work, such candidates will receive the MA degree, along with the PhD. Students not deemed to have demonstrated sufficient mastery to qualify for continuing in the doctoral program will be permitted to complete the remaining requirements for their designated MA program and receive that degree from the College upon its completion.

Requirements

Students who want to apply for this track would have meet the following criteria:

- Hold regular admission status for a specific College MA program and for admission into the PhD program (see requirements below)
- Submit a statement of purpose indicating interest and commitment to graduate work through the doctoral level
- Upon completing 24 hours of graduate coursework, passing a comprehensive, qualifying exam for continuing toward the doctoral degree
- Earn a certificate of completion, or equivalent, for the MA program, whereupon official admission into the doctoral program would be recognized

The Graduate School stipulates that the PhD requires a minimum of 48 hours of graduate course work and 24 hours of dissertation. The expedited track meets this requirement. It is recommend that during the MA track requirements that the expedited students take the doctoral level research methods course (CIS 603) and two theory courses at the doctoral level (CIS 604, CIS 605, CIS 606, or CIS 607), one of which must be in the student’s area of specialization. After qualifying to continue in this track, students must complete 24 hours of coursework at the 600 level in order to complete doctoral program coursework requirements. Each student must complete a minimum of four 600-level seminars from the College of Communication and Information Sciences curriculum. Upon completion of 48 hours of graduate work, PhD candidates then follow the same procedures for exams and dissertation as required of all PhD candidates in the College program.

Assistantships Expedited Program

It is expected that students admitted to the expedited degree program receive funding from the department in which the student takes the first 24 hours. At her discretion, the Associate Dean for Graduate Studies may offer the student a graduate teaching or research assistantship. If the Associate Dean declines to offer the student an assistantship, the department in which the student will earn the MA is expected to provide an assistantship until
the student completes the 24 hours. The decision to provide support for the first 24 hours from the MA department is solely within the department’s judgment.
8.10.1 ADVERTISING AND PUBLIC RELATIONS (APR)

APR 522 Media Planning. Three hours.
Development of media objectives, strategies, and budgets and implementation of media plans for advertising and public relations. Each student prepares and presents a media plan.

APR 531 Political Campaign Management. Three hours.
The study of communication management in the context of political campaigns. Topics include: audience analysis, candidate and electoral context analysis, strategic planning and assessment leadership and campaign mgmt. styles, and data base management.

APR 544 Lobbying. Three hours.
A survey of legislative/political techniques and communication strategies and tactics used by corporations, trade associations, and other interested groups to successfully impact federal policymaking.

APR 550 Advertising/Public Relations Communication Research Methods. Three hours.
A survey of qualitative and quantitative methods in communication research.

APR 551 Advertising/Public Relations Communication Theory. Three hours.
A study of the development of selected mass communication theories as related to advertising and public relations.

APR 560 International Public Relations. Three hours.
Prerequisites: Graduate standing and permission of the academic advisor and instructor. Integration of public relations theory and techniques into complete campaigns. Research and analysis of topics related to international corporate communication, with particular emphasis on the public relations industry in Europe, especially Britain. Offered spring semester, with a field trip to Europe during summer session.

APR 570 Contemporary Advertising and Public Relations. Three hours.
An advanced survey of the academic and professional literature underlying the contemporary practice of advertising and public relations.

APR 572 Persuasive Communication. Three hours.
The practice of creating, writing, editing, and producing persuasive communication for advertising and public relations. Writing skills are exercised extensively in this course.

APR 582 Advertising and Public Relations Management. Three hours.
Problems and decision-making processes involved in the management of advertising and public relations programs and organizations.

APR 583 Research Applications in Advertising and Public Relations. Three hours.
Prerequisite: APR 550.
Application of research methods and procedures for problem solving and impact assessment in advertising and public relations programs.

APR 590 Visual Communication. Three hours.
The practice of developing ideas and creative strategies for professional evaluations about design and its application. Each student prepares a portfolio.

APR 591 Directed Independent Study. One to three hours.
Prerequisite: permission of the instructor.

APR 592 Integrated Communication Project. Three hours.
A message-oriented course. Students conceptualize and execute integrated communication programs. Topics vary.

**APR 596 Independent Study or Research.** One to three hours. Prerequisite: permission of the academic advisor and instructor.

**APR 597 Communication Campaign Workshop I.** Three hours. Research to develop an advertising and public relations campaign for a specific organization. This is the preparation stage for the major case study prepared by the student in APR 598.

**APR 598 Communication Campaign Workshop II (Master's Project).** Three hours. Development and presentation of a complete advertising and public relations plan and proposal for the specific organization studied in APR 597. Integration of theory, concepts, and techniques in a complete communication program.

**APR 599 Thesis Research.** Three hours. Prerequisite: permission of the academic advisor.
To enroll in BA courses, the student must be admitted to the Book Arts Program or have permission of the instructor.

Printing/Publishing

**BA 520 Printing I: Elements of Printing.** Three hours.
Craft skills used in fine letterpress printing are introduced in a studio environment. Through a number of printing/publishing experiments and projects, students gain an understanding of the nature and interaction of printing types with inks and papers; learn fundamental terminology; and gain familiarity with the equipment. The emphasis is on setting type, letterpress printing, and basic typographic design.

**BA 521 Printing II: Typography and Printing.** Three hours.
Prerequisite: BA 520.
Explores contemporary attitudes and innovations in fine printing and fine press publishing through individual printing/publishing projects, as well as a collaborative project. The focus is on typographic design, editorial decision making, color and image integration, and press work.

**BA 522 Printing III: Parallel Editions and Printing.** Three or six* hours.
Prerequisite: BA 521.
Students initiate and produce an edition of a relatively extensive book. Emphasis is on production, with manuscript selection and editing being critical aspects. Photopolymer platemaking processes are introduced in a desktop publishing environment adapted to historic tools and media. Such subjects as marketing and distribution of limited-edition books are covered. For those students taking the 6-hour option, a Parallel Editions book may be produced.

*Required for students with concentrations in either printing/publishing or bookbinding.

**BA 523 Printing IV: Printing and Publishing.** Three or six* hours.
Prerequisite: BA 522.

*Required for students with concentrations in either printing/publishing or bookbinding.

Binding

**BA 530 Binding I: Elements of Binding.** Three hours.
Drawing upon both the historic and contemporary Western bookbinding traditions, this course is an initiation into fundamental binding forms, techniques, materials, and design. A series of cloth and paper bindings will be designed and made. While design and innovation will be stressed, the primary focus of the course will be upon learning technical skills.

**BA 531 Binding II: An Exploration of the Paper- and Cloth-Bound Book.** Three hours.
Prerequisite: BA 530.
Students will continue to hone their fundamental binding skills and acquire new ones while also experimenting with the possibilities that the paper and cloth case binding forms offer, both one-of-a-kind and multiples. The examination and use of nontraditional materials and of innovative binding design are encouraged.

**BA 532 Binding III: Leather Binding.** Three or six* hours.
Prerequisite: BA 531.
A concentrated study of the use of leather as a binding cover material. Various binding styles and structures appropriate to leather treatment are studied. Familiarity with the preparation and application of leather in bookbinding is achieved through a series of assigned projects culminating in a final project. Though not the primary focus of the course, binding design and innovation will be studied and explored.

*Required for students with concentrations in either printing/publishing or bookbinding.
**BA 533 Binding IV: Advanced Binding Exploration.** Three or six* hours.
Prerequisite: *BA 532.*
An exploration of bound books as expressive forms. Students will further refine their leatherworking and binding skills while developing their own binding styles. Emphasis will be placed upon personal binding interpretation of printed texts using traditional and nontraditional techniques and materials.
*Required for students with concentrations in either printing/publishing or bookbinding.

**BA 534 Boxmaking.** Three hours.
Prerequisite: *BA 530.*
Traditional and experimental forms of boxes and other protective enclosures for books. The use of paper, cloth, and leather, as well as other nontraditional materials, will be explored.

**BA 535 Edition Binding/Parallel Editions.** Three hours.
Prerequisite: *BA 531.*
Exploration, design, and creation of appropriate enclosures for books that amplify and enhance the typographic content of the fine limited edition.

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**Papermaking**

**BA 541 Hand Papermaking.** Three hours.
Provides hands-on experience in the fundamentals of making traditional Western-style handmade papers using a variety of fibers. The objective is to produce reference samples of various kinds of sheets, as well as edition sheets of papers for book or art-making purposes.

**BA 542 Decorated Papers.** Three hours.
Introduction to decorative techniques, including experiences in the decoration of papers for binding and printing in a variety of techniques: Turkish watercolor marbling (*ebru-su*), Swedish oil-base marbling, Japanese *suminagashi*, paste papers, printed papers, and stenciling.

**BA 543 Eastern and Alternative Fiber Papermaking.** Three hours.
Introduction to the mysteries of Eastern-style papers handmade from natural fibers. We will also produce papers from plant fibers native or naturalized to the American landscape. The objective will be to make papers suitable for printing or bookbinding purposes, as well as substrate for artistic media.

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**Additional Courses**

**BA 590 Book Design and Production.** Three hours.
Studies the theoretical and practical aspects of book design and production. Emphasis is on the aesthetic principles of bookmaking; the preparation of layouts; and the selection of type faces, papers, and binding materials.

**BA 592 Graduate Symposium.** Three hours.
Prerequisite: Fourth-semester standing.
Discusses professional standards, professional presentation and portfolio building, creative project research, exhibition design, management of a small business, marketing, and other topics. Six meetings during the course of the semester.

**BA 593 Workshops in the Book Arts.** One to twelve hours.
Workshops covering all subjects in the book arts, held both on and off campus.

**BA 594 Practicum in Teaching the Book Arts.** Three or six hours.
Prerequisite: Second-year standing.
Practical experience teaching introductory courses in printing, binding, and other appropriate book arts.

**BA 595 Independent Project.** One to six hours.
Provides an opportunity for the student to pursue independently a project in the book arts.

**BA 596 Directed Research in the Book Arts.** One to six hours.

[http://graduate.ua.edu/catalog/20900.html](http://graduate.ua.edu/catalog/20900.html)
Provides an opportunity for an intensive investigation of both historical and technical studies of a book-arts craft.

**BA 597 Internship.** One to six hours.
Prerequisites: Second-year standing and permission of the faculty.
A direct learning experience in a studio of a professional book artist.

**BA 599 Creative Project Production, Thesis, and Exhibition.** Nine to twelve hours.
The capping experience of the MFA in the book arts program is the creative project, thesis, and exhibition. Working with a faculty advisor, the candidate develops a project that demonstrates a deep understanding of the craft and the aesthetic, historic, and critical contexts of the book; to establish technical expertise; and to work independently. The thesis paper provides the student a formal means in which to articulate the aesthetic, historic, and critical contexts of his or her work as well as the scope and merits of the creative project. The exhibit, which is publicly presented in the Book Arts Gallery, provides the student with an opportunity to showcase both artistic and technical skills and to contextualize the body of work produced during the course of the program. A public defense with a slide presentation is also required.
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8.10.3 COMMUNICATION AND INFORMATION SCIENCES (CIS)

CIS 600 Proseminar in Communication and Information Sciences. One hour *Required. The course is part of orientation for all students in the PhD program. It must be taken during the first semester of study. As an introduction to relevant research and teaching practices, this course allows students to hear presentations by faculty and advanced doctoral students. *PhD program core course.

CIS 601 Proseminar in Pedagogy. One hour *Required. The course is part of orientation for all students in the PhD program. It must be taken during the second semester of study. It introduces the students to teaching techniques in communication and information studies. *PhD program core course.

CIS 602 Colloquium in Communication and Information Sciences. One hour *Required. The course is part of orientation for all students in the PhD program. It must be taken during the third semester of study. The course is designed to allow doctoral students to learn about research being conducted within the College and to make formal presentations of their own research. *PhD program core course.

CIS 603 Communication Research Methods.* Three hours. The course is a PhD core requirement. Topics are a survey of quantitative and qualitative methods in communication and information sciences. The course provides detailed study of research methods appropriate to the PhD specializations. *PhD program core course.

CIS 604 Mass Communication Theory.* Three hours. This course is a PhD core requirement for students specializing in mass communication. The course is a survey of the development of theories of mass communication and provides a detailed study of the theoretical foundation of each student's specialization. *PhD program core course.

CIS 605 Cultural, Critical, and Rhetorical Theory. Three hours. This is a PhD core requirement for students specializing in Cultural, Critical and Rhetorical studies. The course is a survey of the development of theory development in these areas.

CIS 606 Knowledge and Information Theory. Three hours. This is a PhD core requirement for students specializing in Information Studies. The course is a survey of theoretical developments in the study of knowledge and information.

CIS 607 Theory Construction and Epistemology. Three hours. This course is designed to provide detailed study of the philosophical foundations of theory construction and current issues in theories of the nature of knowledge.

CIS 618 Advanced Topics in Library Management. Three hours. Prerequisite: LS 508 or permission of the instructor. Thorough study of all aspects of the organization and administration of libraries and information centers.

CIS 619 Seminar in Education for Librarianship. Three hours. Pass/fail. Study of the major issues in library education. Among the topics considered are theories of education, the university environment, special characteristics of education for the professions, library school faculty, students, and curricula.

CIS 620 Advanced Materials and Programming for Youth. Three hours.
Prerequisite: LS 521 or LS 522. Special topics in materials, programs, and services for children and young adults. May be taken more than once.

**CIS 632 School Media Centers.** Three hours.
Develops a philosophical and functional background of the school media program as an integral part of the teaching-learning process.

**CIS 642 Advanced Instructional Design.** Three hours.
Prerequisite: LS 542.
Thorough study of the human and environmental factors that impinge upon the instructional design consultation process. Selected steps in the instructional design process are emphasized.

**CIS 650 Seminar in Communication.** Three hours.
Topics vary but may be research in broadcast news, libel and privacy, communication management, organizational communication, international communication, or another area appropriate for advanced study and original research. Emphasis is on specific topics outside the main topic areas, but the course supports the PhD specializations and coincides with the research needs of students and the expertise of the directing faculty member. Depending on the interests of participants and on the topic of the seminar, students may conduct research individually or may work together on research projects. May be repeated.

**CIS 651 History of Libraries.** Three hours.
Covers the history of the institutions that preserve and disseminate the records of intellectual progress.

**CIS 652 Seminar in Cultural Critical and Rhetorical Studies.** Three hours.
The examination of a wide range of mediated texts through the intersecting perspectives of cultural, critical and rhetorical analysis.

**CIS 653 Descriptive Bibliography.** Three hours.
Examines the intellectual objectives served by descriptive bibliographies and introduces the methods and problems of bibliographical description of printed books of the hand- and machine-press periods. Emphasis is on the examination and historical analysis of books as physical objects. Primarily for students interested in the history of books, special collections, rare book cataloging, and humanities reference work.

**CIS 654 History of the Book: Print Culture and Society.** Three hours.
Examines the book as a cultural artifact and explores the impact of print culture on communication and knowledge/information production in Europe and the United States. Topics include orality and literacy, reading, authorship, copyright, markets and distribution, and the future of books in a digital age.

**CIS 655 History of the Book: Book as Artifact.** Three hours.
Examines the book as a physical artifact, as the material embodiment of text. Topics include the transitions between hand production and mechanical production, methods of bookmaking, printers and publishers, the alphabetic code, paratext, letterforms and typography, paper, page formats and layouts, illustrations, bindings, and other semiotic systems and bibliographic signifiers, as well as the purpose of the book with special emphasis on the relationships between meaning and physical form and the complex conventions of the book.

**CIS 656 Electronic and Contemporary Publishing.** Three hours.
Focuses on both scholarly and commercial networked digital publishing within the context of the information cycle and information chain from the vantages of contemporary publishing and communication. The course is concerned with the numerous and varied problems/opportunities of electronic publishing and the accompanying paradigm shifts.

**CIS 657 Processes and Effects of Communication.** Three hours.
Study and analysis of how communication works and its effects on audiences.

CIS 660 Database Analysis and Design. Three hours. In-depth coverage of database design techniques. Topics include requirement specifications, data models, schemas, and implementation considerations.

CIS 661 Digital Libraries. Three hours. Prerequisites: LS 560 or currently taking. Prepares students to develop digital libraries, exploring the issues associated with creating, operating, and maintaining digital libraries; analyzing electronic library programs in the U.S. and assessing their impact on education, scholarship and research.

CIS 662 Knowledge Management. Three hours. Prerequisites: LS 560 or currently taking. Covers theories and practices of knowledge management, analyzing how knowledge is created, shared and synthesized; conditions that inhibit or enhance information sharing, including competitive intelligence; and technological tools and systems, including case studies.

CIS 663 Communication Technologies. Three hours. Study and analysis of the advent of communication technologies and their impact on communication and society.

CIS 664 Communication Institutions. Three hours. Study and analysis of the development and management of communication institutions and their place in society.

CIS 665 Communication Message Analysis. Three hours. Study and analysis of communication messages, their antecedents, and their potential effects.

CIS 666 Information Policy. Three hours. Explores key federal information policies and related legislative/regulatory activities. Focuses on relationships between public policy evolution and the spread of information technologies; emphasizes social, economic, and equity impacts and mitigating circumstances.

CIS 667 Persuasion. Three hours. Study and analysis of the persuasive function of communication through theoretical and/or strategic approaches.

CIS 668 Communication as Entertainment. Three hours. Study and analysis of the entertainment function of communication and its uses for audience information, recreation, and education.

CIS 669 Visual Communication. Three hours. Study and analysis of visual communication in its various forms, intended uses, and potential effects.

CIS 671 Public Opinion. Three hours. Study and analysis of the formation and expression of public opinion and its relation to communication.

CIS 672 Media History. Three hours. Historical investigations of communication through descriptive, evaluative, critical, and/or archival approaches.

CIS 673 Political Communication. Three hours.
Study and analysis of political communication theory, research, practice, and/or criticism.

**CIS 674 Communication Law and Policy.** Three hours. Study and analysis of public policy concerning the expression of communication, as articulated by the various branches of government and/or society.

**CIS 690 Practicum in Teaching Library and Information Studies.** Three hours. Designed to give doctoral students interested in a teaching career extensive teaching experience under the direct supervision of one or more faculty members. The goal is to assume responsibilities for a course. Cannot be applied to the minimum 48-hour course requirement.

**CIS 697 Directed Research.** Variable Credit. Original research not related to the dissertation, conducted under the direction of a graduate faculty member.

**CIS 698 Independent Study.** Three hours. Pass/fail. Prerequisite: Doctoral standing. Study of a topic in librarianship under faculty direction. Not part of dissertation research.

**CIS 699 Doctoral Dissertation.** Variable credit. Three-hour minimum.
8.10.4 COMMUNICATION STUDIES (COM)

**COM 500 Introduction to Graduate Studies.** One hour. The primary goal is to orient new graduate students to the expectations and procedures of graduate study in the department. Topics covered include developing the plan of study, thesis prospectus, comprehensive examination, and choosing advisors and committees.

**COM 501 Introduction to Teaching Public Speaking.** No hours. The primary goal of this course is to facilitate the instruction of COM 123 Public Speaking. Students enrolled in this course will provide lesson plans for their classes and discuss options for improving classroom learning.

**COM 513 Communication and Diversity.** Three hours. Study and analysis of issues of diversity as they relate to groups in society and in communication fields. Emphasis is on the media's treatment of various groups in society. Approved as a communication and cultural diversity elective.

**COM 515 African American Rhetoric.** Three hours. A historical-critical investigation of African American public discourse from the Revolutionary era to the present, exploring rhetorical strategies for social change and building community.

**COM 521 Political Communication.** Three hours. An exploration of rhetorical, media, and cross-disciplinary theories and literature related to political communication as expressed in campaigns and institutional governance.

**COM 525 Gender and Political Communication.** Three hours. Study of the impact of gender on political communication activities. Topics include gender differences in political messages and voter orientation, masculine ideals of leadership, women’s roles and advancement in the political sphere, and media representations.

**COM 536 Independent Study.** Three hours. Prerequisite: Written permission. Students who want to count this course toward their Plans of Study must complete the official request form and submit it for the approval of their faculty advisor and the Graduate Program Director.

**COM 541 Contemporary Rhetorical Theory.** Three hours. A survey of major contributions to rhetorical theory from the 20th century up to the present.

**COM 545 Classical Rhetorical Theory.** Three hours. A systematic inquiry into the development of Greek and Roman rhetorical theory during the classical period (ca. 480 B.C.E.–400 C.E.).

**COM 548 Seminar in Rhetorical Criticism.** Three hours. An examination of various methodological perspectives of rhetorical criticism. Specifically, the course aims to familiarize students with both traditional and alternative critical methods and to encourage students to perceive the rhetorical dimensions of all manner of public discourse, ranging from speeches, advertising, film, popular music to discursive forms in new media and the Internet.

**COM 560 Group Leadership.** Three hours. An advanced study of small-group behavior, examining in detail theories of leadership as they relate to problem solving in group situations.

**COM 561 Human Communication Theory.** Three hours.
A detailed review of selected theories of speech communication with a focus on the critical examination of the foundation of social scientific theories.

**COM 562 Theories of Persuasion.** Three hours.
A critical review of social-influence theories in the area of persuasion and human action.

**COM 563 Relational Communication.** Three hours.
Prerequisite: COM 220 or permission of the instructor.
Focused investigation of communication in close personal relationships, with primary emphasis on contemporary concepts and theories of romantic relationships and friendships.

**COM 567 Seminar: Public Address.** Three hours.
A topical consideration of individual case studies from public discourse, designed to probe problems of the nature of the audience, the ethics of persuasion, and the power of public advocacy in mass society. Topics may vary.

**COM 569 Communication and Gender.** Three hours.
Explores the role of communication in the construction of gender. Covers feminist theoretical approaches in communication and other disciplines, the intersections of gender with other marginalities, and the role of gender in various communication contexts. Approved as a communication and cultural diversity elective.

**COM 571 Seminar in Organizational Communication.** Three hours.
An introductory examination of historical and contemporary issues in organizational communication scholarship from a variety of theoretical and methodological perspectives.

**COM 572 Seminar in Organizational Communication: Assessment and Intervention.** Three hours.
Examines the theoretical issues inherent in the study of organizational communication, the primary factors requiring assessment and intervention, the impact of on-going changes and new information techniques, current challenges facing the organizational consultant, and the practical application of communication processes for improving organizations.

**COM 590 Internship in Communication Studies.** One to three hours.
Prerequisite: Written permission from the graduate program director.
Proposal for supervised field experience in communication studies must be submitted and approved.

**COM 595 Special Topics.** Three hours. Topics vary by instructor.

**COM 598 Practicum Project or Research.** Three hours.

**COM 599 Thesis Research.** One to three hours.
8.10.5 JOURNALISM (JN)

JN 500 Orientation to Graduate Studies. One hour. Taken the first semester. Introduces students to the program and program requirements and provides a forum for presentation and discussion of faculty and student research.

JN 501 Producing Community Journalism. Three Hours. Primary first-term skills course. Focus is on gathering, writing, editing and presenting of news and information across media platforms.

JN 502 Media Production Tools. Two hours. Instruction in, and critical analysis of, communication technologies used in the production of journalism.

JN 503 Media Management and Operations. Three hours. The class gives students “hands-on” experience with the operation of a news organization, as well as a conceptual understanding of management and economic principles.

JN 511 Depth and Investigative Reporting. Three hours. Researching and writing major multiple-source articles, series, and projects for newspapers and magazines.

JN 512 Editorial Leadership. Three hours. Study of the role, function, and construction of editorials and other persuasive writing. May be repeated.

JN 515 Advanced Magazine Writing. Three hours. Writing and marketing of magazine articles. Study of technical, industrial, employee, and general-circulation magazines.

JN 520 Advanced Editing and Design of Publications. Three hours. Lecture and laboratory. Study, research, applications, and production of traditional and online newspapers, magazines, and related media.

JN 525 Creative Non-Fiction Writing I. Three hours. Study of journalism through works and leading non-fiction authors. Includes extensive writing in this genre.

JN 526 Creative Non-Fiction II. Three hours. Study of journalism through works and leading non-fiction writers. Includes extensive writing in this genre.

JN 536 Teaching of Journalism. Three hours. Prerequisite: CSE 579 or permission of the instructor. Introduction to the techniques and practices of teaching scholastic journalism and management of school newspapers, yearbooks, and literary magazines.

JN 552 Journalism Theory and Research. Three hours. Exploration of theory and an overview of research approaches as they relate to the study of news media and their role in communities.


JN 561 Special Topics. Three hours.
Studies in specialized topics ranging from the theoretical to the practical. May be repeated for credit when the topic varies.

**JN 562 Contemporary Issues in Journalism.** Three hours. Examines current issues facing the news media, ranging from professional problems to the human, social, and other consequences of news, news practices, and news technology.

**JN 563 History of Journalism and the First Amendment.** Three hours. Study of the history of the principles and practices of American journalism, with particular attention to the First Amendment and freedom of the press.

**JN 564 Seminar in Journalism Research and Scholarship.** Three hours. Studies of applications of research in journalism. May be repeated for credit when topic varies.

**JN 567 Seminar in Professional Journalism.** Three hours. Studies in selected aspects of the practice of journalism. May be repeated.

**JN 590: Special Problems in Journalism.** One to three hours. Independent study as arranged.

**JN 591 Special Problems in Communication.** Three hours. Independent study as arranged.

**JN 597 Master's Project.** One to three hours. Students must complete three hours total in the Plan II option.

**JN 599 Thesis Research.** One to twelve hours. Students must complete six hours total in the Plan I option.
8.10.6 LIBRARY AND INFORMATION STUDIES (LS)

LS 500. Organization of Information. Three hours. **Required course** introducing the principles of organizing bibliographies, library catalogs, and collections. Examines the content of bibliographic records in printed and machine-readable form, choice and form of access points, authority control, verbal and classified systems of subject access, and the impact of new technologies. An introduction to OCLC searching is included. The course objective is to enable the student to understand and use catalogs and bibliographies. Students interested in becoming catalogers should follow LS 500 with LS 506 Cataloging and Classification.

LS 501. Introduction to Library and Information Studies. Three hours. **Required course** designed to provide the student with a broad background in library and information studies, this course must be taken during the first 12 hours of a student's program. Through a variety of instructional methods, this course examines three interrelated themes: the nature of the library and information profession; issues of intellectual freedom and access to information; and the impact of technology upon society and the profession.

LS 502. Research Methods. Three hours. **Required course** introducing research design and statistical techniques used in library, media, and information science. At the conclusion of the course, the student should be able to comprehend and utilize research reports in these fields and to design and carry out basic research projects.

LS 503. Systems Analysis. Three hours. Investigation of the concepts of systems analysis; investigation and use of the techniques of systems analysis; and study of applications of systems analysis in library and information systems.

LS 504. Media Production and Utilization. Three hours. Instructional modules that introduce the student to basic skills in the preparation and utilization of educational media.

LS 505. Collection Development. Three hours. Explores principles and issues involved in developing library collections. Aspects such as community analysis, policy development, selection and acquisitions, resource sharing, evaluation, weeding, and preservation are examined.

LS 506. Cataloging and Classification. Three hours. **Prerequisite**: LS 500. Explores problems of descriptive cataloging of print and non-print materials; subject access using Library of Congress subject headings, LC classification, and Dewey decimal classification; OCLC searching, record modification, and inputting; and contemporary issues in bibliographic control.


LS 508. Administration and Management. Three hours. Designed to introduce students to the theory and practice of modern management by studying the management aspects of authority, communications, decision making, delegation, leadership, personnel, planning, budgeting, and motivation. Use is made of case studies and simulations.

LS 510. Information Resources--Humanities. Three hours. **Prerequisite** or **corequisite**: LS 507.
Surveys and evaluates the major informational and bibliographical resources in literature, mythology, religion, philosophy, history, and the visual and performing arts.

**LS 511. Information Resources--Social Sciences.** Three hours.
**Prerequisite or corequisite:** LS 507.
Surveys scholarly communication and the use of information in the social sciences. The use of reference sources in psychology, sociology, economics, anthropology, and political science is taught.

**LS 512. Information Resources--Sciences.** Three hours.
**Prerequisite or corequisite:** LS 507.
Surveys scientific and technical communication, the bibliographic structure of science and technology, and information services for scientists and technologists. In-depth study of the major information sources in biology, chemistry, physics, mathematics, engineering, and geology is included.

**LS 513. Information Resources--Government Publications.** Three hours.
**Prerequisite or corequisite:** LS 507.
Explores the nature, use, and organization of local, state, federal, and international documents.

**LS 514. Sources of Business Information.** Three hours.
**Prerequisite or corequisite:** LS 507.
Surveys and evaluates the major informational and bibliographical resources in business librarianship.

**LS 515. Advanced Information Sources and Services.** Three hours.
**Prerequisite:** LS 507.
Emphasizes bibliographic reference sources and the development of problem-solving techniques and examines problems in the administration of reference services and policy issues.

**LS 520. Early Childhood Materials and Story Programs.** Three hours.
Introduces a wide variety of print and non-print early literacy materials for young children ages birth to seven with an emphasis on selecting materials and developing literature-based story programs to meet the educational, cultural, and recreational needs of young children.

**LS 521. Materials and Services for Children.** Three hours.
Explores materials (print and non-print) and programs appropriate for children ages 6 to 12.

**LS 522. Materials and Services for Young Adults.** Three hours.
Explores materials (print and non-print) and programs appropriate for teenagers.

**LS 523. Materials and Services for Adults.** Three hours.
Examines services, programming, and popular materials provided to adult users of public libraries.

**LS 524. Project Management in Information Setting.** Three hours.
Introduces graduate level concepts and skills associated with project management in information rich environments. Includes teamwork, team development, and collaborations.

**LS 527. Library User Instruction.** Three hours.
**Pre-requisite:** LS 501 & LS 507.
This course is intended to provide students with an introduction to the concepts, theories, and practice of library user instruction through reading, discussion, class speakers, and practice. The focus of the course will be on instruction for adult users in public and academic library settings.

**LS 530. Public Libraries.** Three hours.
Examination of public library development, purpose, governance, and services and exploration of issues and concepts involved in managing public libraries.
Study of the role of library service in higher education.

LS 532. School Media Centers. Three hours.
Develops a philosophical and functional background of the school-media program as an integral part of the teaching-learning process.

LS 533. Special Libraries and Information Centers. Three hours.
Philosophy, environment, and unique aspects of the services, operation, and management of special libraries and information centers are covered. Provides considerable opportunity for study of topics of interest to individual students.

LS 534. Medical Librarianship. Three hours.
Prerequisite or corequisite: LS 507 or permission of the instructor.
Introduction to medical librarianship and the environment in which it operates. Orientation to the health care field, operation and administration of health sciences libraries, and basic information sources and services for the health sciences is included.

Introduces the fundamentals of information and records management. Content includes (a) inventory, scheduling, and auditing records; (b) active and inactive information maintenance; (c) organizing and administering a records center; and (d) applications for information systems, computer, microform, paper.

LS 536. Archives. Three hours.
Survey of archival resources and special collections, with attention to their organization, administration, and service problems.

LS 537. Music Librarianship. Three hours.
Introduces the concepts of music librarianship: collection development and management, and sources for music research.

LS 538. Law Libraries and Legal Resources. Three hours.
Introduces the concepts of law library management and the techniques and materials of legal research.

LS 541. Youth Programming. Three hours.
Explores various types of literacy programs and outreach services for youth (children, tweens, and teens) as well as the development and management of library environments that facilitate life-long learning and reading adventures.

LS 542. Instructional Design and Development. Three hours.
Prerequisite: LS 504 or permission of the instructor.
Comprises a series of modules that cover the basic skills required to undertake instructional development. Materials needed to plan and prepare instruction, as well as exercises designed to upgrade interpersonal skills, are included. Designed for library-media specialists, supervisors, administrators, and others who assist teachers in the development of instruction.

LS 543. Traditional & Digital Storytelling. Three hours.
Introduces a wide variety of storytelling techniques both traditional and digital (technology-based) and explores how these strategies can be used in library programs and services for children and young adults. Emphasis is placed on developing personal storytelling skills via technology and traditional resources. A web-cam is required for this course.

Provides an introduction to the forensic examination of manuscripts and books as artifacts, and acquaints students with their materials and structures, manufacturing technology, and historical development as media. Emphasis is on papers, leathers, synthetics, binding structure, and methods of conservation treatment, with particular attention to conservation concerns in developing collection-management and disaster-prevention policies.
LS 560. Information Technology. Three hours.
**Required course.** This course provides future information professionals with a solid foundation of basic information technologies at the skill, conceptual, and analytical levels. Acquaints students with the role of technology in information organizations. Students gain hands-on experience in web application production from a user-centered perspective, including: hypertext, usability analysis, database application, and technology instruction. Foundations of change management are addressed. IT Fluency is used as a model to explore the topics of this course.

This course introduces basic theories, concepts, issues, and tools of the information sciences: bibliometrics, citation analysis, indexing, abstracting, thesauri, use and user studies, automated and expert systems, and cognitive studies. The evolution and structure of the profession, and properties and theories of information, are covered. The course also examines societal aspects of technology: community information systems, networks, equity, power and control issues, economics, and policy issues.

**Prerequisite or co-requisite:** LS560.
Prepares students to develop digital libraries, exploring the issues associated with creating, operating, and maintaining digital libraries; analyzing electronic library programs in the U.S. and assessing their impact on education, scholarship and research.

LS 563. Indexing and Abstracting. Three hours.
Traditional and computerized approaches to indexing, abstracting, and thesaurus construction and maintenance are examined. Deals with classification systems, indexing and abstracting typologies, measures of relevance and system effectiveness, vocabulary control vs. free-text searching, and applications of cognitive-science research. Evaluation of abstracting and indexing services and organizations, as well as current and emerging standards, is conducted.

**Prerequisite or co-requisite:** LS560 or instructor permission.
The main focus of this course is to learn basic programming concepts and skills for managing different types of content and developing interactive systems. Java is the programming language used in this course to explore the development of digital libraries. We will start out at a beginner's level with Java, and students will gain understanding of basic programming syntax, data structures, and logic. Students will then learn how to develop applications for more applied tasks, including data parsing and processing, and extending specialized Java packages for implementing further functionality of system components found in digital libraries.

LS 565. Economics of Information. Three hours.
The course explores applications of economics principles to information and knowledge systems. It examines information as an economic good; methods for valuing information; characteristics and trends of the information economy; pricing of information products and services; and techniques for performing and evaluating cost-benefit analyses of information systems. Relationships between information economics, federal and state information policies, and social equity are explored.

LS 566. Metadata. Three hours.
**Prerequisite:** LS 500
An advanced course in the organization of information focusing on record creation in various metadata contexts, including images, video, educational objects and the Semantic Web.

LS 567. Digital Reference. Three hours.
**Prerequisite:** LS 507
Explores societal problems and professional developments that relate to digital reference services in public, academic and special libraries. Explores the impact of digital reference on users and libraries.
**LS 568. Managing Network Information Resources.** Three hours.

The course introduces the various aspects of creating and maintaining a web presence for an organization. It provides an introduction to the technical and conceptual skills needed to comprehend the phenomenon of the World Wide Web; understand its potential; create and maintain a web presence of modest scope and complexity; create and manage knowledge resources; and undertake further training in the technologies employed to create and maintain Web resources and Intranets.

**LS 569. Information Management.** Three hours.

This course will survey information management tools and techniques applied for maintaining, processing, and disseminating digital information. Specific topics will include physical database structures, database design, database-driven web applications, user interface, and representation for retrieval. Course exercises cover fundamental techniques for data modeling, implementing and querying databases, and information visualization.

**LS 570. Internship in Library and Information Studies.** Three hours.

**Prerequisite:** Consent of the instructor.

**LS 572. Internship in School Media Centers.** Three hours.

**Prerequisites:** LS 532 and consent of the instructor.

**LS 580. Outreach to Diverse Populations.** Three hours.

Explores diverse cultural groups and the ways that all types of libraries can effectively serve the informational and recreational needs of these populations.

**LS 581. Universal Design for Information Technologies.** Three hours.

**Prerequisites:** LS 560 Information Technology. Examines the place of information and communication technologies, online resources, and social networking tools in the current practice of information and communication interactions for persons with mild to severe physical access challenges.

**LS 590. Special Topics in Library and Information Studies.** Three hours.

The course explores societal problems and professional developments that have, or are likely to have, an impact on the practice of librarianship.

**LS 593. Problems in Library and Information Studies.** Three hours.

Students pursue specialized study in a variety of subjects in library and information studies.

**LS 594. Introduction to Philanthropy and Institutional Advancement.** Three hours.

**Prerequisite:** Advanced Graduate Status (completed 12 hours).

The course is designed to provide a broad overview of the field of philanthropy and institutional advancement. It is especially suited for those who may assume administrative positions in a wide variety of non-profit services or cultural agencies.

**LS 598. Directed Research in Library and Information Studies.** One to six hours.

**Prerequisites:** LS 502 and consent of the instructor. Pass/fail.

The course provides the opportunity for an intensive investigation of a special aspect of library and information studies, under the supervision of an appropriate faculty member.

**CIS 606. Knowledge and Information Theory.** Three hours.

The course is open to doctoral students regardless of their disciplinary concentrations and to master's students who have completed most core / required courses and who have an interest in exploring the theoretical side of communication and information. The seminar addresses theories of knowledge and information as social phenomena: their characteristics, development, values, uses, and management, including the influence of technology. The ideal student in this seminar will work to become conversant with the concepts and acquainted with their principal exponents. Student evaluation is based on preparedness for and contribution to seminar discussion.

**CIS 618. Advanced Topics in Library Management.** Three hours.

**Prerequisite:** LS 508 or consent of the instructor.
A thorough study of all aspects of the organization and administration of libraries and information centers.

**CIS 619. Seminar in Education for Librarianship.** Three hours. A study of the major issues in library education. Among the topics considered are theories of education, the university environment, special characteristics of education for the professions, library school faculty, students, and curricula.

**CIS 620. Advanced Materials and Programming for Youth.** Three hours. The course explores the psychological and sociological implications of the development of programs and services for children and young adults.

**CIS 621. Intercultural Perspectives in Youth Literature.** Three hours. Addresses cultural stereotypes and issues surrounding cultural authenticity in children's and young adult literature, and suggests how librarians / educators can help children use literature to make intercultural connections with youth from diverse cultural backgrounds. Provides opportunities to explore diverse perspectives and theories related to selecting, analyzing, and interpreting international and multicultural literature for youth.

**CIS 642. Advanced Instructional Design.** Three hours. **Prerequisite:** LS 542. A thorough study of the human and environmental factors that impinge upon the instructional design consultation process. Selected steps in the instructional design process are emphasized.

**CIS 651. History of Libraries.** Three hours. Covers the history of the institutions that preserve and disseminate the records of intellectual progress.

**CIS 653. Descriptive Bibliography.** Three hours. Examines the intellectual objectives served by descriptive bibliographies and introduces the methods and problems of bibliographical description of printed books of the hand- and machine-press periods. Emphasis is on the examination and historical analysis of books as physical objects. Primarily for students interested in the history of books, special collections, rare book cataloging, and humanities reference work.

**CIS 654. History of the Book: Print Culture and Society.** Three hours. Examines the book as a cultural artifact and explores the impact of print culture on communication and knowledge/information production in Europe and the United States. Topics include orality and literacy, reading, authorship, copyright, markets and distribution, and the future of books in a digital age.

**CIS 655. History of the Book: Book as Artifact.** Three hours. Examines the book as a physical artifact, as the material embodiment of text. Topics include the transitions between hand production and mechanical production, methods of bookmaking, printers and publishers, the alphabetic code, paratext, letterforms and typography, paper, page formats and layouts, illustrations, bindings, and other semiotic systems and bibliographic signifiers, as well as the purpose of the book with special emphasis on the relationships between meaning and physical form and the complex conventions of the book.

**CIS 656. Electronic and Contemporary Publishing.** Three hours. Focuses on both scholarly and commercial networked digital publishing within the context of the information cycle and information chain from the vantages of contemporary publishing and communication. The course is concerned with the numerous and varied problems/opportunities of electronic publishing and the accompanying paradigm shifts.

**CIS 659. Special Topics in the History of the Book.** Three hours. Studies in specialized topics.

**CIS 660. Database Analysis and Design.** Three hours.
In-depth coverage of database design techniques. Topics include requirement specifications, data models, schemas, and implementation considerations.

**CIS 661. Digital Libraries.** Three hours.  
**Prerequisites:** LS 560 or currently taking.  
Prepares students to develop digital libraries, exploring the issues associated with creating, operating, and maintaining digital libraries; analyzing electronic library programs in the U.S. and assessing their impact on education, scholarship and research.

**CIS 662. Knowledge Management.** Three hours.  
**Prerequisites:** LS 560 or currently taking.  
Covers theories and practices of knowledge management, analyzing how knowledge is created, shared and synthesized; conditions that inhibit or enhance information sharing, including competitive intelligence; and technological tools and systems, including case studies.

**CIS 666. Information Policy.** Three hours.  
Explores key federal information policies and related legislative/regulatory activities. Focuses on relationships between public policy evolution and the spread of information technologies, emphasizing social, economic, and equity impacts and mitigating circumstances.

**CIS 690. Practicum in Teaching Library and Information Studies.** Three hours.  
Designed to give doctoral students interested in a teaching career extensive teaching experience under the direct supervision of one or more faculty members. The goal is to have the responsibilities for a course. *Cannot be applied to the minimum 48-hour course requirement.*
MC 501 Mass Media Law and Regulation. Three hours. A study of the laws affecting the media, decisions, and case histories that act as guides for the media. Independent readings and papers are required.

MC 505 Social Responsibility of the Mass Media. Three hours. Interrelationships of government, the public, and the media. Independent readings and papers are required.

MC 509 History of Mass Communication. Three hours. An intensive study of the historical development of the media. Independent readings and papers are required.

MC 511 International Mass Communication. Three hours. A survey of communication systems and theories operative in the world. Independent readings and papers are required.

MC 513 Communication and Diversity. Three hours. Study and analysis of issues of diversity as they relate to groups in society and in communication fields. Emphasis is on the media's treatment of various groups in society.

MC 517 Mass Communication and Public Opinion. Three hours. Nature, development, formation, and distribution of politically relevant attitudes and opinions; role of leadership, persuasion, and communication in opinion-policy process. Emphasis on the role of the media in the formation of public opinion and on how the media are influenced in turn by public opinion.

MC 521 Political Communication. Three hours. The purpose of this course is to explore the general character and dimensions of the cross-disciplinary field of political communication. The principal aim is to familiarize each participant with the literature and propositions surrounding key approaches, methods, and substantive areas of inquiry in political communication.

MC 531 Political Campaign Management. Three hours. The study of communication management in the context of political campaigns. Topics include: audience analysis, candidates and electoral context analysis, strategic planning and assessment, leadership and campaign mgt. styles and data base management.

MC 544 Lobbying. Three hours. A survey of legislative/political techniques and communication strategies and tactics used by corporations, trade associations, and other interest groups to successfully impact federal policymaking.

MC 550 Communication Research Methods. Three hours. A survey of qualitative and quantitative methods in communication research.

MC 551 Seminar in Communication Theory. Three hours. A study of the development of selected theories of communication as they pertain to interpersonal, public, and mass communication.

MC 581 Media Analysis Seminar. Three hours. A study of media content and its effects on society.

MC 582 History of Communication Seminar. Three hours.
Research and study in the historical development of the media, particularly in the United States.

**MC 583 Media and Society Seminar.** Three hours. Research and study in society's expectations of the media and the response of the media.

**MC 585 Communication Law Seminar.** Three hours. Research in and study of specific laws and regulations related to the media.

**MC 595 Special Topics in Mass Communication.** Three hours. Special topics in mass communication theory and research. May be repeated.
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8.10.8 TELECOMMUNICATION AND FILM (TCF)

Advanced study of selected topics in television criticism.

TCF 520 Telecommunication Effects. Three hours.
Study of individual and social effects of audio and visual mass media, with emphasis on research results.

TCF 533 Broadcast News Analysis. Three hours.
Historical and critical analysis of broadcast news and public-affairs programs in the United States; research methodology used in the assessment of news programming.

TCF 540 Seminar in American Cinema. Three hours.
Study of selected topics in American film genre, authorship, and the star system.

TCF 541 The Documentary Form. Three hours.
The documentary presentation in cinema and telecommunication as an informative and persuasive means of communication. Analysis and discussion of selected documentaries.

TCF 544 Seminar in Telecommunication/Film Topics. Three hours.
Analysis of contemporary issues in broadcasting, cable, and/or motion-picture industries. Topics vary with instructor.

TCF 545 Telecommunication Media Management. Three hours.
Study of station, cable TV, and network organization; decision making; and research techniques.

TCF 547 Telecommunication History and Systems. Three hours.
The development of the global information infrastructure since the middle of the 19th century, a comparative review of national legal and regulatory systems, international decision-making mechanisms and effects, the evolution of new forms of governance for the World Wide Web environment, and current issues.

TCF 548 Telecommunication Policy and Law. Three hours.
Organizational structures and processes that formulate and apply laws and regulations shaping broadcast, cable, satellite, and "new technology" operations; analysis of national policies and standards and their relationship to regional and international controls and practices.

TCF 553 Seminar in Telecommunication. Three hours.
Topics and instructors change with each offering. Individual research is emphasized. May be repeated, with permission of the instructor (6-hour limit).

TCF 575 Cable Television and New Technologies. Three hours.
Study of the history of the cable TV industry and operation of contemporary cable systems and selected other electronic media systems, such as communication satellites, wireless cable, cellular telephones, and high-definition video.

TCF 577 Cinema Seminar. Three hours.
Study of special topics in the history and theory of the cinema. May be repeated with permission of the instructor (6-hour limit).

TCF 597 Independent Research. Variable credit.
Prerequisites: Permission of the instructor and approval of the student's program committee. May be repeated with permission of the instructor and approval of the program committee (6-hour limit).

**TCF 598 Master's Research Project.** One to three hours.

**TCF 599 Thesis Research.** One to six hours.
9. COLLEGE OF COMMUNITY HEALTH SCIENCES

The College of Community Health Sciences (CCHS) is committed to the education of students in the health sciences. CCHS provides the last two years of clinical training for a portion of the medical students enrolled at the University of Alabama School of Medicine, and it operates a three-year family practice residency program.

CCHS welcomes students from disciplines other than medicine. A variety of graduate-level courses are offered, as are internship and research opportunities for students in nursing, health care management, nutrition, psychology, education, social work, and other disciplines.

9.1 Admission Requirements

The College of Community Health Sciences does not offer a degree, and students taking courses offered by CCHS are enrolled in other Graduate School programs or the University of Alabama School of Medicine (medical students). Admission requirements for these programs are given elsewhere. For the most current information, contact the registrar in the Dean's Office, College of Community Health Sciences, Box 870326, Tuscaloosa, AL 35487-0326; phone (205) 348-7707; e-mail pmurphy@cchs.ua.edu; or visit the Graduate School's website and the Admission Criteria section of this catalog.

Graduate minor in community health sciences. The aim of the graduate minor in community health sciences is to provide the student with an understanding of health and disease as processes influenced by a wide range of factors, from the molecular to the sociocultural. The minor emphasizes the concepts and tools of epidemiology, community and family medicine, and behavioral sciences. To obtain a graduate minor, the student must successfully complete 12 hours in community health sciences (CHS) courses. The following three courses are required:

<table>
<thead>
<tr>
<th>Required courses</th>
<th>Semester hours</th>
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</thead>
<tbody>
<tr>
<td>CHS 520 Basic Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>CHS 527 Health Policy and Planning</td>
<td>3</td>
</tr>
<tr>
<td>CHS 610 Special Problems in Medical Behavioral Science</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition, students must take 3 credit hours of their choice from other graduate CHS offerings.

It is anticipated that the entering student will have a sufficient background in quantitative methods. If not, the student will be required to take CHS 525 Biostatistics prior to the other required coursework; CHS 525 will complete the student's required 12 credit hours.
9.2 COURSE DESCRIPTIONS (CHS)

The courses listed below are open to qualified graduate students. Medical school and family practice residency curricula are published separately from this catalog.

**CHS 500 Rural Environment/Occupational Health.** Three hours.
Prerequisite: Standing as a Rural Medical Scholar or permission of the instructor.
The goal of the course is to help the student recognize environmental and occupational health hazards in the rural setting, the effects of exposure to these hazards, and preventive measures that should be taken to avoid them.

**CHS 520 Basic Epidemiology.** Three hours.
Prerequisite: CHS 425 or equivalent.
A course for students in health-related fields. The basic epidemiologic approach is developed; principles and methods are learned through readings (text and published studies), lectures, discussions, and the preparation of a research design by each student.

**CHS 522 Community Clinical Process.** Three hours.
Prerequisite: Standing as a Rural Medical Scholar or permission of the instructor.
A combination of scheduled sessions and fieldwork activities. The fieldwork will consist of visiting with an assigned rural advisor, completing a rural community assessment, and assisting with community health screenings and education programs.

**CHS 525 Biostatistics.** Three hours.
A course in statistical methods and concepts particularly appropriate for biomedical research and health-related subjects. Topics include descriptive statistics, probability, parametric and nonparametric procedures for one-group and two-group problems, contingency tables, and computer applications.

**CHS 526 Advanced Biostatistics.** Three hours.
An advanced course in statistical methods and concepts particularly appropriate for biomedical research and health-related subjects. Topics include simple and multiple regression, analysis of variance, and analysis of covariance.

**CHS 527 Health Policy and Planning.** Three hours.
Designed to assist the student in understanding the planning process and factors that influence and determine policy decisions.

**CHS 532 Community Clinical Process II.** Three hours.
Prerequisite: CHS 522 or equivalent.
A continuation of studies from CHS 522 that will include an introduction to basic physical assessment techniques and continuation of a community project.

**CHS 560 Introduction to Medical Science.** Three hours.
Prerequisite: Second-year standing in social work or graduate standing in a health- or mental-health-related discipline.
Introduces social workers and other allied health professionals to the basic processes and components of the health care system; the major structures and characteristics of human body systems; the common or characteristic pathophysiological processes associated with these body systems; and the implications of illness and wellness for the individual, the family, and the community.

**CHS 610 Special Problems in Medical Behavioral Science.** One to three hours.
Open to graduate students in the social and behavioral sciences by permission of the instructor. Research or directed reading in behavioral science.

**CHS 620 Independent Study in Preventive/Community Medicine.** One to three hours.
Research or directed reading in community medicine topics, including health care delivery, preventive medicine, and health policy aspects of other related topics.

**CHS 622 Directed Research in Community Health.** One to three hours. An advanced applied-research course designed to develop skills in the analysis and evaluation of health problems of community interest.

**CHS 627 Multivariate Methods of Health Statistics.** Three hours. Prerequisite: CHS 526 or equivalent. Emphasis is on application and interpretation of statistical software that performs techniques such as multivariate analysis of variance, discriminant analysis, logistic regression, log-linear modeling, and factor analysis.
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10. COLLEGE OF EDUCATION

The College of Education offers graduate programs leading to the master of arts, the educational specialist, the doctor of education, and the doctor of philosophy degrees.

10.1 GENERAL ADMISSION REQUIREMENTS

To be considered for regular admission to a graduate program in the College of Education, a student must satisfy both of the following admission requirements:

- An entrance examination score of at least 300 on the revised Graduate Record Examination (GRE), 1000 on the GRE general test, or a score no lower than the 50th percentile on the Miller Analogies Test (MAT).
- An undergraduate grade point average of 3.0 on a 4.0 scale, a 3.0 average for the last 60 semester hours in a degree program, or a 3.0 or higher in a completed graduate degree program.

An applicant whose credentials do not meet the above requirements may be considered in some programs for conditional admission, if one of the following minimum requirements is satisfied:

- An overall grade point average of 2.75 (2.5 Kinesiology)
- An entrance examination score no lower than the 40th percentile on the entrance examination required by the department

Admission to graduate programs is competitive. Meeting minimum requirements does not guarantee admission, only that students will be reviewed for admission. Applications are reviewed by departmental screening committees with consideration given to such factors as academic and professional backgrounds, test scores, personal traits, professional goals and aspirations, and other factors that pertain to the ability to complete the program successfully and continue a productive career. The Graduate School makes final admissions decisions based on departmental recommendations and the Graduate School's review of applications.

A student may enroll for one semester only as a nondegree student in the College of Education and is subject to the conditions outlined in Section 4.4 of this catalog for nondegree students. Responsibility rests with the student to observe the limitations imposed on credit hours, coursework, and transfer of credit.

An applicant to a College of Education program that leads to professional certification must submit references from current and former professors and supervisory personnel knowledgeable of the applicant's academic and professional capabilities.

Fingerprinting Requirement
Any candidate admitted to a State-approved teacher education program shall be required to be fingerprinted for a criminal history background check through the Alabama State Department of Education to the Alabama Bureau of Investigation (ABI) and the Federal Bureau of Investigation (FBI) pursuant to ACT 2002-457. This includes all students (traditional, alternative, out-of-state, and distance learners) enrolled in MA and EDS programs that lead to Alabama certification, regardless of whether or not they are pursuing Alabama certification. The background check is completed at the student's expense, and suitability must be documented in Student Services & Certification before the student is assigned placement in a clinical setting. [Alabama Administrative Code 290-3-2-.02(9)(d)]

Additional admission information is in the Admission Criteria section and in the individual department descriptions of this catalog.
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10.2 MASTERS DEGREE PROGRAMS

The College of Education offers graduate work for the master of arts degree in counselor education (school counseling, clinical mental health counseling, and rehabilitation counseling); educational leadership; higher education administration; educational psychology; general educational psychology; educational psychology: school psychometry; elementary education; human performance; secondary education (music education is available as a specialization within secondary education); and special education.

The rules of The University of Alabama Graduate School pertaining to transfer of credit, academic progress, graduation requirements, admission to candidacy, and time limits apply to all students in College of Education masters degree programs and are found in the Degree Requirements section of this catalog.

Masters Programs Prerequisites

The prerequisites for programs leading to the master of arts degree in education include (a) the completion of an appropriate baccalaureate curriculum, and in most programs, (b) professional teacher certification. For a student in college and clinical mental health counseling or higher education, the completion of a bachelor's degree in an approved program is required. For a student in music education, audition, ensemble performance or teaching sample, and music history and music theory testing are required prior to or during the first 12 hours of graduate study.

For a student in educational leadership, valid Class B Professional Educator Certificate in a teaching field or a valid Class A Professional Educator Certificate in a teaching field or instructional support area and three full years of full-time, acceptable professional educational experience in a P-12 setting, which must include at least one full year of full-time P–12 teaching experience, are required. In addition, students preparing for positions in educational leadership are required to complete screening procedures, including special tests, interviews, and portfolios.

Masters Degree Requirements

There are two study plans available to students pursuing the master of arts degree. Candidates for the masters degree under Plan I must earn a minimum of 24 semester hours of credit in coursework and must write a thesis. Candidates for the masters degree under Plan II must earn a minimum of 30 semester hours of credit; a thesis is not required.

Masters degree programs leading to professional certification normally require a minimum of 30 semester hours. Nontraditional, alternative certification programs requirements vary; however, they normally require 39–45 graduate hours in addition to any of the applicant's undergraduate deficiencies. Courses that are taken for undergraduate credit may not be repeated for graduate credit. In compliance with regulations established by the Alabama Department of Education and outlined in the Alabama Administrative Code, coursework used to meet Class B certification requirements may not be used to meet requirements for Class A certification in any teaching field or area of instructional support.

Each student pursuing a masters degree is required to file an Admission to Candidacy for the Masters Degree after 12 semester hours of graduate credit have been earned at The University of Alabama. The Admission to Candidacy for the Masters Degree form is available at the Graduate School website. It must be approved by the time of registration for the semester in which requirements for the degree are completed.

Additional details on Admission to Candidacy and all other degree requirements are in the Degree Requirements section of this catalog and may be outlined in the individual program descriptions in this catalog. Under each plan (including the nontraditional, alternative program) the student must pass a written comprehensive examination in the field(s) of study.

http://graduate.ua.edu/catalog/21900.html
at an appropriate time toward the close of the student's work.

**Nontraditional, Alternative Initial Teacher Certification Program**

The College of Education has been approved by the state board of education to offer special programs of study leading to the masters degree for degree holders who have not previously completed a teacher-education program. Admission to these programs requires a passing score on an entrance examination-- the revised Graduate Record Examination (GRE), the GRE general test, or the Miller Analogies Test (MAT)--appropriate for admission to the Graduate School and a minimum 3.0 grade point average for all previous college-level work attempted. Individuals may be considered for conditional admittance if the graduate admission test score or GPA does not meet the above criteria. Additionally, applicants to alternative certification programs must earn a passing score on each subtest of the Basic Skills Assessments of the Alabama Educator Certification Testing Program (AECTP) for admission. Information about the Basic Skills Assessment is available online at https://actapps.act.org/wkala/wkala or in Student Services, 104 Carmichael Hall.

Individuals applying for alternative initial teacher certification programs must also meet the minimum qualifications that are expected of candidates entering and completing undergraduate (Class B) certification in the same discipline. This usually means minimum GPA requirements in the core curriculum as well as minimum GPA requirements within the disciplines in which the applicant is seeking certification. Other requirements, such as completion of writing tests, a passing score on the Alabama Educator Certification Testing Program (AECTP), and other screening associated with undergraduate certification, must be completed before formal admission to the alternative certification program. Some additional undergraduate work may also be required for admission. In addition to admission to the Graduate School, each prospective student must secure an appropriate transcript evaluation letter from personnel in the Office of Student Services and Certification, 104 Carmichael Hall. Students may not complete more than five approved program courses prior to unconditional admission. *[Alabama Administrative Code 290-3-3-.44(3)(a)]*

Nontraditional, alternative certification programs are available in elementary, English for speakers of other languages (ESOL), languages other than English (foreign languages), music education, physical education, secondary education (most fields), and special education (collaborative, early childhood special education, gifted, and multiple abilities).

To graduate, students in these programs must complete the required semester hours in specific graduate courses. Upon completion of the program, the student is eligible to be recommended for an Alabama Class A Professional Certificate. For most programs, no more than 12 semester hours of graduate courses may be completed in a nontraditional, alternative program before the removal of all admission deficiencies, unless special permission is granted by department heads in conjunction with personnel in the **Office of Student Services and Certification**, 104 Carmichael Hall. A student with a master’s or higher degree in a secondary teaching field (or K–12 in music) generally may apply up to 12 semester hours from that degree to the fulfillment of teaching field requirements.

**Clinical Placements**

All clinical placements in the College of Education relating to teacher certification are coordinated through the Office of Clinical Experiences. These placements are in the greater Tuscaloosa area (with the exception of music education) in order to facilitate supervision of students. For students in the educational leadership program, internships are coordinated through the Department of Educational Leadership, Policy, and Technology Studies.

**Professional Liability**

Students enrolled in College of Education courses that require a clinical placement are required to provide proof of professional liability insurance before being allowed to participate in a clinical placement. Professional liability insurance may be purchased through an independent insurer or is available to students who are members of the Student Alabama Education Association (SAEA), the Council for Exceptional Children (CEC), or Collegiate Music Educators National Conference (CMENC). Further information and membership applications may be obtained from the Office of Clinical Experiences.
Teaching Internship Requirements
The teaching internship (formerly called student teaching) is one of the most important experiences College of Education students have. It is generally regarded as the culminating activity of one's preparation to become a teacher.

At The University of Alabama, the internship is a full-semester, full-time assignment and must be taken in residence.

Both alternative (nontraditional, fifth-year) and graduate students must file internship applications with the Office of Clinical Experiences in 105 Graves Hall during the semester preceding the semester of the planned internship. The application process begins by attending a mandatory application session, which is held the first Wednesday in October for spring-semester interns and the first Wednesday in March for fall-semester interns. The time, date, and place of the application session are announced at the beginning of each semester. The deadline for filing applications for a spring-semester internship is October 31; for a fall-semester internship the deadline is March 31.

Students may apply to enroll for an internship if they meet the following criteria:

- The student must have completed all courses in the major or majors, or must secure written permission to enroll for an internship from the appropriate department head.
- The alternative master's student must show proof of a passing score on the Praxis II Content Test.
- The traditional master's student must show proof of a passing score on the Praxis II Content Test if seeking certification in an area which differs from current certificate.
- The student must have achieved a minimum grade point average of 3.0, both for all University of Alabama courses attempted and for all University of Alabama courses and transfer courses combined.
- The student must have achieved a minimum grade point average of 2.75 in each major, both for University of Alabama courses in each major and for combined University of Alabama courses and transfer courses in each major.
- The student must have achieved a minimum grade point average of 2.75 for professional education coursework.
- The student must have completed all methods courses and appropriate professional coursework with grades of "C" or better.
- The student must have removed from the transcript any grade of incomplete ("I") recorded in required courses; grades of incomplete are treated as grades of "F."

Registration for Internship Credit Hours
Graduate students are required to register for the number of internship credit hours specified by their program. In some programs, graduate students may be allowed to choose a 6-hour registration or a 9-hour registration; course requirements are the same whether 6 hours or 9 hours are taken. Graduate students whose program requires two internship placements should register for two sections of internship (3 hours per section or 4.5 hours per section). Students enrolled for internship must not expect to be enrolled in other courses while interning.

Policy on Internship Placements
All internship placements are coordinated by the College of Education Office of Clinical Experiences. Placement sites are selected so as to ensure the quality of the internship experience and of the supervision provided by the cooperating teacher. All internship placements are in the greater Tuscaloosa area (with the exception of music education) in order to facilitate supervision of students by University of Alabama faculty or other designees of the department heads. Placements outside the greater Tuscaloosa area are made only if the director of clinical experiences and/or the department head determines that an appropriate local placement is unavailable.

Students may apply for overseas internships if they meet certain criteria and if appropriate placements can be coordinated by the Consortium for Overseas Student Teaching (COST) and/or The University of Alabama. Applications for overseas internships are taken during
January for placements for the next fall semester, and in May for placements the succeeding spring semester. Contact the Office of Clinical Experiences in 101 Graves Hall for additional information.

**Internship Assignments:**
- Elementary education (K–6) interns will receive two internship assignments: half in grade K, 1, 2, or 3; and half in grade 4, 5, or 6.
- Secondary education (6–12 or 7–12) interns with a comprehensive major may receive one or two internship assignments; students with two secondary majors will receive a split internship assignment; half in each major.
- Special education-CTP (K–6 or 6–12) interns will receive a split internship assignment: half in a severe and profound setting and half in a mild to moderate setting. The placements will be divided according to their certification grade levels.
- Special education-early childhood (birth–age 8) interns will receive a split internship assignment: half in a special education preschool setting and half in a kindergarten through 2nd grade setting. These placements will be in a public school setting where a child has been identified with a disability.
- MAP (K–6) interns will receive two internship assignments: one 12 week semester placement will be in a general education classroom (K–6) and the other 12 week semester placement will be in a special education setting (K–6).
- P–12 programs in physical education, foreign language, or music education interns should expect to have a split internship assignment between an elementary and a secondary school.
- English for Speakers of Other Languages (ESOL) interns should expect to have a split internship assignment between an elementary and a secondary school or if ESOL interns are employed full-time as an ESOL teacher in a public school setting, they may complete one semester of internship in their own classroom under the supervision of their building principal and a first-term summer semester of internship in an ESOL summer program coordinated by the Office of Clinical Experiences under the supervision of a University of Alabama ESOL faculty member.

**Summer Internship**
Summer internships are rarely available and then only to persons who hold an undergraduate degree and certification and have one or two years of successful teaching experience at the level and in the subject for which they are seeking certification (with approval from the department head). In addition, summer internship assignments are allowed only if an appropriate placement can be secured in the Tuscaloosa area and appropriate supervision can be provided. These conditions also apply to those seeking to update or renew their certification or add an additional endorsement to a current certificate. To apply for a summer internship, file an appropriate application with the Office of Clinical Experiences in 105 Graves Hall by March 31 of that year.
**10.3 PROFESSIONAL CERTIFICATION**

**Alabama Class A Professional Certificate**

Class A teacher education programs are designed to help teachers more effectively serve the purposes defined for the same teaching field at the Class B level, provided such programs exist. The intent of the fifth-year program is to help the teacher develop higher levels of competence than is possible in the Class B program. Following a review by the Alabama State Board of Education, the Class A Professional Certificate is granted to the student who (a) has applied for and has been recommended for certification by the College of Education, and (b) has completed a preplanned graduate program, approved by the state board of education, that includes a master's degree. It is important to remember that the awarding of a master's or higher degree does not necessarily imply that the student is eligible for Class A certification. Applicants for the certificate must also present to the Alabama Department of Education evidence of successful and appropriate teaching experience, as follows: for certification as a library/media specialist, two years; as a counselor or psychometrist, two years; as an educational administrator, three years.

The Class A certificate is valid for five years and may be renewed according to regulations of the [Alabama State Board of Education](http://www.ade.state.al.us).

**Alabama Class AA Professional Certificate**

The essential objective of the sixth-year program is to extend upward the level of competence of the teacher. Following a review by the Alabama State Board of Education, the Class AA Professional Certificate is granted to students who (a) have applied for and are recommended for certification by the College of Education, and (b) have completed a preplanned graduate program, approved by the state board of education. Students seeking Class AA professional certification must enroll in and complete the EdS. (or doctoral) degree program in the desired certification area in order to obtain the University's recommendation for Class AA professional certification. Courses used to qualify for a lower-level supporting certificate may not be used again as part of a higher-level certification program.

A cumulative grade point average of not less than 3.25 is required for all graduate work attempted after the master's degree, and a final comprehensive examination is required. A maximum of 15 semester hours of appropriate post-master's-degree credit earned through an institution approved to offer graduate programs beyond the master's level in the field of study in which the credits were earned may, with approval by the department head or his or her designee, be applied toward the Class AA Professional Certificate. It is important to remember that the awarding of a graduate degree does not necessarily imply that the student is eligible for Alabama certification.

A student completing requirements for a masters degree during a semester or summer session who does not need a full class load to meet those requirements may, with approval of the advisor and department head, register for additional courses toward a Class AA Professional Certificate, not to exceed the maximum prescribed class load.

**Alternative Approaches to Certification**

In addition to "regular" certification programs, the Alabama State Board of Education offers five alternative approaches to certification. These are as follows: (a) alternative baccalaureate-level approach (contact the [Alabama Department of Education](http://www.ade.state.al.us)); (b) alternative fifth-year-level approach (see information in this catalog); (c) speech- and language-impaired approach; (d) nationally certified school psychologist approach; and (e) National Board for Professional Teaching Standards approach. Further information regarding these alternative approaches is available via the Office of Student Services and Certification, 104 Carmichael Hall.
Policies for Out-of-State Students at Fifth-year (Class A) and Sixth-year (Class AA) Levels for Any Area Except Educational Administration

Admission requirements for fifth-year (Class A) programs for teachers include "eligibility for Class B certification in the teaching field(s) in which Class A certification is sought," except in a few specified fields.

Admission requirements for sixth-year (Class AA) programs for teachers include "eligibility for Class A certification in the teaching field(s) in which Class A certification is sought," except in a few specified fields.

Out-of-state students who do not meet the above admission requirements to enroll in courses at the respective levels may be recommended to other state departments of education based only on completion of coursework, not completion of approved programs. Thus, these students will not be eligible for Alabama certification and, if and when the students wish to receive Alabama certification and teach in Alabama, they must present verification of eligibility for an appropriate prerequisite Alabama certificate before being recommended for Alabama certification.

Policy for Fifth-year Level Educational Administration

All students (not just Alabama students) must meet all admission requirements for the Class A Educational Administration Program before enrolling in the program.

Changes in Certification Requirements

The programs listed in this catalog that lead to Alabama Class A and Class AA professional certificates for service in the public schools may be altered to meet certification standards adopted by the Alabama State Board of Education. Check with the appropriate department head for information.

Coursework and/or a degree accepted from institutions outside the United States shall be substantiated by an evaluation of the foreign credentials from a state, federal, or private foreign credential evaluation service recognized by the Teacher Education and Certification Office. Contact the College's Office of Student Services and Certification for more information.
The College of Education offers graduate work for the educational specialist (EdS) degree in counselor education; educational leadership; educational psychology; general educational psychology, educational psychology, educational research, and school psychology; elementary education, secondary education (music education is available as a specialization within secondary education); and special education.

The College of Education conducts its EdS programs in accordance with The University of Alabama Graduate School policies outlined in the Degree Requirements section of this catalog. The EdS degree requires a minimum of 30 semester hours of study beyond the master's degree. (Students completing an EdS program and also expecting to receive an Alabama Class AA certificate for service in the public schools must complete a minimum of 30 semester hours and achieve a minimum 3.25 grade point average on all work attempted.)

Admission to the Graduate School does not mean that the EdS student is admitted to candidacy for the degree. Requirements for admission to candidacy for the EdS degree are the same as those for the master's degree in the same area. A student should note any foreign language requirement. Each EdS student completes the Admission to Candidacy for the EdS Degree form that is on the Graduate School's website and submits it to the Graduate School. The Graduate School must approve the student's EdS plan of study prior to admission to candidacy for the degree.

A standard form for an EdS plan of study is not available at the Graduate School's website, because each department or program participating in the EdS degree has established a framework of requirements for the degree that indicates the general structure of its program.

Additional information concerning the plan of study, admission to candidacy, admission and degree requirements may be outlined in the individual program descriptions, College of Education Admission requirements and the Graduate School's Admission Criteria and Degree Requirements sections of this catalog.

Graduate students seeking AA certification at The University of Alabama must enroll in and complete the EdS (or doctoral) program in that certification area in order to obtain University of Alabama recommendation for AA certification. A student who takes a course for credit in a master's level program may not take the same course for credit in a sixth-year program. In compliance with regulations established by the Alabama Department of Education and outlined in the Alabama Administrative Code, coursework used to meet Class B or Class A certification requirements may not be used to meet certification requirements for Class AA certification in any teaching field or area of instructional support.
10.5 DOCTORAL PROGRAMS

Programs leading to the doctor of philosophy (PhD) degree are offered in counselor education, educational administration, higher education administration, educational psychology, educational research, elementary education, human performance, instructional leadership, school psychology, secondary education (music education is available as a specialization within secondary education), and special education. Programs leading to the doctor of education (EdD) degree are offered in counselor education, educational administration, higher education administration, educational psychology, elementary education, instructional leadership, school psychology, secondary education (music education is available as a specialization within secondary education), and special education. The doctoral programs are designed for school personnel and others engaged in educational service and leadership.

A masters degree from an accredited institution is required for admission into any EdD or PhD program in the College of Education. Other objective and subjective criteria are employed to select students whose success can be reasonably predicted. Some doctoral programs have further prerequisites for admission such as a professional teaching certificate and/or certain experience in teaching or a related activity. Those who wish to pursue doctoral study in the College of Education should communicate directly with the head of the department in which they seek to work.

In planning a program, doctoral students should follow these steps:

Declaration of Intent
Before establishing a doctoral committee, students must successfully complete a screening process in the department in which they wish to study. The applicant initiates the screening process by filing a declaration of intent form with the appropriate department head. The forms are available in the departmental offices.

Preliminary Conference
As part of the screening process, appropriate faculty members review information the applicant has supplied and interview the applicant. In this preliminary conference, consideration is given to factors such as the applicant's academic and professional background, test scores, personal traits, professional goals and aspirations, and other factors that pertain to the ability to complete the program successfully and continue a productive career. The applicant is notified of the decision of the screening committee by the department head within a few days following the preliminary conference. The department head notifies the College of Education Office of Student Services of the decision by returning the appropriately marked declaration of intent form.

Appointment of Advisor and Doctoral Program Advisory Committee
Students accepted for doctoral study will be asked to confer with the appropriate department head regarding the appointment of advisors and program advisory committees. Nominations for appointment to these committees are made by the program chairperson through the department head to the dean of the College.

EdD program advisory committees usually consist of a minimum of three members of the graduate faculty: a chairperson who represents the student’s major area of study and who will be the major advisor for the student in program planning and research, and two members (one from outside the department of the College in which the student is majoring) who can also be of assistance in their areas of expertise.

PhD program advisory committees must have at least five members: a chairperson, who is drawn from the graduate faculty and who represents the student's major area of study (the chairperson serves as the major advisor in program planning and research) and four members, one of whom must be from outside the department of the student's major.
Program Planning
As soon as possible after the appointment of the doctoral program advisory committee, but no later than the end of the first semester of doctoral study, the student and the major advisor should convene a meeting of the program advisory committee. At this program-planning meeting, the student provides each member with a formal written summary of graduate study to date. The student and the committee then plan a program of study to meet the academic and professional needs of the student and fulfill all requirements of the program, the College, and the Graduate School. Plan of Study forms for both doctoral degrees may be obtained in the departmental offices.

Official copies of the Plan of Study agreed upon by the student and the committee shall be dated, signed by the committee members and the department head, and distributed to the Office of the Graduate School, to the student's program office for inclusion in the student's program file, to the dean, and to the committee members. Any deviation from the Plan of Study must be approved by the committee and noted by the chairperson on the student's official record. An amended Plan of Study (if needed) must be submitted to the Graduate School when the student submits the form for Admission to Candidacy for Doctoral Degree.

All doctoral students must have a completed Plan of Study approved by the Graduate School no later than the semester during which the student will complete 30 semester hours of UA and/or transfer credit for the doctoral degree. Otherwise, a "hold" may be placed on future registrations.

The program advisory committee continues to assist the student in program planning and advisement until the student satisfactorily completes all major and minor comprehensive examinations.

Degree Requirements
The PhD requires a minimum of 72 hours of graduate study beyond the master's degree, comprising at least 48 hours of coursework and 24 hours of dissertation research. The course of study must include no fewer than 24 semester hours in a major field, a minimum of 12 semester hours in foundational coursework, and a minimum of 12 semester hours in research methods. Although there is no longer a college-wide requirement, individual departments may stipulate additional hours for a minor requirement or research methods.

The EdD degree requires a minimum of 72 hours of graduate study beyond the master's degree, including at least 60 hours of coursework and 12 hours of dissertation research. The course of study must include no fewer than 24 hours in a major field, a minimum of 12 semester hours in foundational coursework, and a minimum of 12 semester hours in research methods. With the approval of the Student's program advisory committee, some departments permit up to 6 semester hours of dissertation research credit to be included in the 60 hours of required coursework. In such cases the minimum number of hours is 66.

Students pursuing PhD and EdD degrees in the College of Education must satisfy the following foundations requirement: 12 hours of graduate coursework comprising (1) any BEF or BEP classes or (2) any non-research methods courses outside the student's department. Foundations courses cannot come from the student's major program. Approved by the program study committee, these classes should introduce the student to theoretical discourses and bodies of knowledge that provide a depth and breadth of understanding necessary for fluency with the research, theory, and scholarship foundational to the student's field of inquiry and dissertation research. A 12–15 semester hour research/statistics competency is also required in all PhD and EdD programs.

Additional information is in the Degree Requirements section of this catalog.

Major and Minor Examinations
Each PhD candidate must demonstrate competence in his or her major fields (and minor fields, if required by the department). Each EdD student must demonstrate competence in the
broad area of knowledge and any areas of specialization specified in his or her program of study. Written comprehensive examinations are required to determine competence in the student's major (PhD) or broad area of knowledge (EdD). A student who fails a major or minor examination may repeat it only once.

A student may apply to take the comprehensive examination in the major after filing a Plan of Study, completing at least one semester in residence, and obtaining approval of the department head (or the department head's designee) to take the examination. An examination application should be filed with the appropriate department head at least four weeks in advance of the scheduled testing date.

Comprehensive examinations in minor fields or areas of specialization can be taken after the student has completed all coursework in the minor field. The chairperson of the program or department offering the minor or area of specialization may establish evaluating procedures other than a written comprehensive examination.

Dissertation Committee
The dissertation committee, with the director of the dissertation as its chairperson, is responsible for assisting the doctoral student in developing and conducting dissertation research. Once the dissertation committee is formed, the student's program planning committee is disbanded. To form the dissertation committee, the student meets with the chairperson of the program advisory committee to discuss a potential dissertation topic and identify faculty with relevant expertise who by virtue of full membership in the graduate education faculty may chair the dissertation committee. The student then requests such a faculty member to chair the dissertation committee, and together they recommend at least four additional members of the committee, at least one of whom is from outside the department that includes the student's major field of study.

The graduate dean’s approval of the proposed dissertation committee is expected to be obtained before significant progress is made on the dissertation--typically just before or just after the dissertation proposal meeting. For this purpose, the student submits the form for Appointment/Change of a Doctoral Dissertation Committee.

Selection of the committee chairperson and members should be based on the relationship between the expertise and scholarly interests of the faculty members and the student's proposed dissertation topic. The student and committee chairperson recommend the committee to the program chairperson who recommends the committee to the department head, who in turn recommends the committee to the dean of the College of Education.

The dissertation committee chairperson provides intense counsel in selecting the dissertation problem, developing the proposal, coordinating input from committee members, chairing committee meetings, guiding the student's dissertation research, guiding the writing of the dissertation, and chairing the oral defense of the dissertation. The dissertation committee assists the student in developing the proposal, conducting dissertation research and writing the dissertation, and judges the adequacy of the student's dissertation defense. Close cooperation and involvement of all committee members are expected at all stages of the dissertation process, from the development of the proposal to successful oral defense of the dissertation. The student, in consultation with the chairperson of the committee, is responsible for scheduling committee meetings.

Dissertation Proposal
The dissertation is a contribution to research and literature in a field. It represents the student's ability to identify a problem; develop an understanding of the relevant literature and previous research in an area of inquiry; formulate cogent research questions or hypotheses; report and discuss results of investigation; and derive conclusions, implications, and recommendations from results. The dissertation proposal is the first major step in this process.

The topic of the dissertation should evolve from the student's academic and professional interests. The topic will not be accepted until the dissertation committee formally meets and approves a comprehensive dissertation proposal. While a student may present a brief
prospectus to the committee informally, the acceptance of the complete dissertation proposal is necessary before the student has approval from the committee to pursue the dissertation, and before the student is admitted to candidacy for the doctoral degree.

The dissertation proposal will include an introduction to the problem, a statement of the problem, research questions or hypotheses, a comprehensive review of literature and related research, a description of the methods of inquiry or research methods to be employed in the investigation, and the results of pilot studies (where appropriate). It is expected that the information presented in the proposal will be comprehensive and will include discussion of the areas just mentioned in a form that is essentially the same as the final dissertation. Some departments require a formal prospectus prior to the dissertation proposal.

Prior to the formal proposal meeting of the dissertation committee, the student should confer with all committee members. The written dissertation proposal must be provided to members of the committee at least 10 working days prior to the proposal meeting. The Graduate School policy on article-style dissertations may be found in the Degree Requirement section of this catalog.

Upon acceptance of the dissertation proposal, including completion of any changes recommended by the committee, each committee member will sign the acceptance page of the dissertation proposal. One copy of the signed proposal will be filed with the chairperson of the dissertation committee and one copy will be forwarded to the program chairperson and department head for the student's permanent file. The student is then eligible for admission to candidacy for the degree; the application for admission to candidacy for degree must be completed. The dissertation proposal will be maintained in the program and departmental office until the student completes and successfully defends the dissertation.

Typically, the student's major advisor (chairperson of the dissertation committee) will serve as the chief advisor for the dissertation research and preparation of the dissertation. However, another advisor may be selected if the choice of topic warrants such action. Such a change must be approved by the program chairperson and department head, in consultation with the student. In addition, more than five faculty members may serve on the dissertation committee. Students are encouraged to seek advice and assistance with their research from any member of the dissertation committee and from staff members in the College of Education Research Assistance Laboratory.

The dissertation must comply with the regulations in A Student Guide to Preparing Electronic Theses and Dissertations. Graduate School deadlines, including each semester's dissertation deadline, are available at the Graduate School's homepage.

Additional information is in the Degree Requirements section of this catalog. The length of work on dissertation research will vary. In no case shall the student be allowed to take an oral examination on the dissertation before having been admitted to candidacy.

Admission to Candidacy
After approval of the dissertation proposal, and completion of all major and minor examinations, the student is eligible for admission to candidacy for the degree. The Admission to Candidacy for the Doctoral Degree form for the PhD or EdD degree is provided by the Graduate School. The student completes the form; obtains the signatures of the dissertation committee, department head, and other appropriate officials; and has the form forwarded to the dean of the College of Education for signature. The completed candidacy form is submitted to the Graduate School for final approval. The department head reports the results of all comprehensive examinations to the College's Office of Student Services and Certification and to the Graduate School.

No student may be admitted to candidacy in a program requiring teaching experience before completing the minimum number of years of appropriate teaching or other experience acceptable to the dissertation committee. A statement of experience from previous employers may be required.
Once a student has met the requirements for admission to candidacy for a doctoral degree, doctoral students (except those in the DMA program) must pursue completion of the dissertation without interruption by enrolling each semester for at least 3 hours of dissertation research; DMA students must enroll each semester for at least 1 hour of document research. This is true whether or not the student has submitted an application for Admission to Candidacy for the Doctoral Degree. Each PhD student must have completed a minimum of 24 hours of such dissertation work upon completion of the degree. Additional information is in the Degree Requirements section of this catalog.

**Oral Examination**

Since the dissertation research results from the acceptance of the proposal, a minimum of two semesters normally is anticipated prior to oral defense of the dissertation. This time frame ensures adequate attention to discussion of results, their implications for the field, and recommendations for future scholarship.

When all requirements have been met and the dissertation is completed, the student shall arrange a meeting of the dissertation advisory committee; the student shall distribute copies of the dissertation to the members at least 10 working days prior to this meeting.

At least 10 working days prior to defending the dissertation, the student must send an abstract of the dissertation to all faculty in the College of Education along with an invitation to attend the defense that indicates time and place of the defense. The student must defend the dissertation satisfactorily in that meeting and must pass any other examinations considered appropriate. The record of the student's performance on the final defense of the dissertation will be noted on the proper forms, in accordance with requirements of the Graduate School. These forms will be signed by committee members.

It is the responsibility of the student to submit to the Office of the Graduate School, six weeks prior to graduation, two copies of the dissertation and the abstract in the final, approved form. Further changes or corrections may be suggested by the Graduate School at this time, and these must be completed or reconciled before graduation.

**Time Limits for Doctoral Study**

All degree requirements must be completed within seven years (21 fall, spring, and summer semesters) following admission to the doctoral program. For example, a student being admitted to and enrolled in the 2009 fall semester may utilize appropriate coursework earned during the 2003 fall semester and may also utilize appropriate coursework earned through the 2016 summer semester.

Previous graduate credit may be applied to the doctoral degree if the credit was earned during the six-year period prior to admission to the doctoral program. Such credit must be identified clearly on the Plan of Study and requires Graduate School approval. Only those students graduating within the time limit for their doctoral program may apply previous graduate credit to the doctoral degree if the credit was earned during the six-year period prior to admission to the doctoral program.

**Time Limits Extension Request**

Only under well-documented, extraordinary circumstances beyond the student's control, a student may petition for a one-semester extension to the seven-year time limit that, if recommended by the department head and approved by the college dean and finally the graduate dean or his designee, will not require the student to validate any out-of-date courses. Validation of out-of-date courses is not an option in the College of Education. If a student fails to complete all degree requirements within seven years of his or her admission to the doctoral program or within a Graduate School approved one-semester extension, the student will be officially suspended from the doctoral program and must reapply for admission.

**Repeating Courses When Given an Extension**

When requests are made for extension of Graduate School deadlines, and it is deemed that an out-of-date course is integral to the degree program, the dean of the College of Education

http://graduate.ua.edu/catalog/22200.html
may request permission of the Graduate School for the course to be repeated. In such instances, both grades shall be used in calculation of the GPA.

**Residence Requirements for Doctoral Study**

A minimum of two academic years of graduate study beyond the masters degree is required for completion of EdD and PhD programs in the College of Education. At least one academic year of doctoral study (or its equivalent, as noted below) must be spent in continuous residence as a full-time student on the campus of The University of Alabama.

Doctoral program advisory committees may approve either of the following alternatives for meeting residence requirements:

- one full summer term and the following fall semester engaged in coursework on a full-time basis on the campus
- a spring semester and the following full summer term engaged in coursework on a full-time basis on the campus

Students pursuing alternative doctoral residency in the Instructional Technology concentration of the Instructional Leadership Ph.D. degree will enroll in 18 hours of approved graduate level coursework across three consecutive semesters. The 18 hours of coursework must include at least nine hours of approved coursework at the Tuscaloosa campus, three hours of coursework in AIL691: Doctoral Seminar: Instructional Technology, and no more than six hours of advisor approved online/distance education/Gadsden coursework.

Students in the secondary education and educational leadership EdD (not PhD) programs have the option to meet the doctoral residency requirement by following an alternative policy that is on file with the Graduate School. Contact the Graduate School for details.

Students at the Gadsden Center may fulfill EdD residency by completing 24 graduate hours while continuously enrolled for a period of 24 months.

**Transfer Credit**

Appropriate graduate credit beyond the master's degree that was earned in other accredited institutions may be transferred (with departmental and Graduate School approval) and applied to doctoral requirements, but in no case can the amount of transferred credit exceed one-half of the hours required for the degree. In calculating the number of transferable hours, dissertation-research credit hours are subtracted from the total degree requirements. A student completes a Request for Transfer of Graduate Credit and submits it to the Graduate School. The student also must ensure that the Graduate School has an official (not faxed or copied) transcript of the credit involved. It is best to apply for official transfer of credit in the student's first semester of doctoral enrollment; otherwise, the student and advisor will be unsure about the number of course hours needed when submitting the required Plan of Study. Plan of Study forms for both doctoral degrees may be obtained in the departmental offices.

Additional information concerning admission and degree requirements may be outlined in the individual program descriptions in this catalog. Admission and degree requirements for the Graduate School (Admission Criteria and Degree Requirements) and the College of Education (General Admission, EdS, PhD) are detailed in earlier sections of this catalog.
The mission of the Department of Educational Leadership, Policy, and Technology Studies is to prepare ethical and reflective practitioners, researchers, and scholars for work in K–12, higher education, and other educational settings. Through teaching and outreach, the department strives to promote the values, knowledge, and skills needed to improve education in the state and across the region, and, through the scholarly activities of its faculty and students, contribute to national research. Leadership in all areas requires an understanding of curricular, instructional, supervisory, and administrative processes—as well as awareness of the ever-changing social, political, legal, moral, and economic contexts of education. In line with the College’s Conceptual Framework, programs offered through the department meet these challenges by addressing the themes of Student and Community, Disciplinary and Pedagogic Expertise, Technology and Assessment, Collaboration and Life-long Learning, and Democracy and Diversity. We respect diversity, honor difference, and promote social justice. The department also maintains an on-going, open dialogue about educational improvement through its association with various federal, state, and local educational agencies and professional organizations.

The department offers Class A and Class AA certification programs in educational leadership, master's degrees in educational leadership and higher education administration, EdS degrees in educational leadership, and EdD and PhD degrees in educational leadership, higher education administration, and instructional leadership. Within the Instructional Leadership doctorate, students may also pursue concentrations in Instructional Technology or Social and Cultural Studies in Education. Courses in these two areas are also provided at the undergraduate level through the department.

Admission to the Graduate School (Admission Criteria) and the College of Education (General Admission) does not ensure admission to the doctoral programs. Admission forms and requirements, specific program parameters, departmental policies, and contact information for each doctoral degree can be found at the ELPTS website.

The department comprises the following academic programs.

- Computer & Applied Technology
- Educational Leadership
- Educational Administration
- Instructional Leadership
- Higher Education Administration
- Social Foundations of Education

Computers and Applied Technology Program
Professor Angela Benson, Office: 328F Graves Hall
The Computers and Applied Technology Program provides supporting coursework in computer technology for students throughout the College and also offers a doctoral minor and coursework to fulfill the PhD Detailed information about the coursework or the minor may be obtained from the department head.

Additional information is in the Degree Requirements section of this catalog.
EDUCATIONAL LEADERSHIP
Professor Bob L. Johnson, Jr., Office: 302 Graves Hall

The following programs provide learning opportunities for educators who hold or aspire to leadership responsibilities in educational settings. Courses in these programs are designed to provide students with technical, interpersonal, and conceptual skills essential to theory and practice. Degrees offered by the Educational Leadership Program include the MA and the EdS. In addition, study options are available to provide eligibility for both Class A and Class AA certification application. Admission and degree requirements for the Graduate School and for the College of Education are detailed in an earlier section of this catalog.

Master of Arts in Educational Leadership/Class A Certification (P–12)

(30 semester hours). The primary purpose of the Master of Arts degree in Educational Leadership is to provide students with the initial certification in Alabama for Instructional Leadership. Because the degree program is coterminous with the certificate, we are calling it the Instructional Leadership Program (ILP). The coursework provides students with a thorough knowledge and understanding of the central concepts, tools of inquiry, and structures of the field of instructional leadership. Candidates learn to work with students, families, and communities in ways that reflect the dispositions expected of educational leaders. The program content is consistent with state and national standards.

The requirements for admission to the ILP program leading to administrative certification include (a) a valid Class B professional educator certificate in a teaching field or a valid Class A professional educator certificate in a teaching field or instructional support area, (b) a minimum of three full years of full-time, satisfactory professional educational experience in a P-12 setting, which must include at least one full year of full-time P-12 teaching experience, (c) the submission of a portfolio before the interview, and (d) passing an interview conducted by the program admission committee. Individuals must be unconditionally admitted to the Class A instructional leadership program before enrolling in any instructional leadership courses in the program.

The portfolio must include (a) three letters of recommendation, one of which must be from the applicant’s principal or supervisor, (b) a completed copy (all forms) of the most recent performance evaluation including the professional development component, if available, (c) evidence of ability to improve student achievement, (d) evidence of leadership and management potential, including evidence of most recent accomplishments in the area of educational leadership, (e) a summary of the candidate’s reasons for pursuing instructional leadership certification, and (f) a summary of what the candidate expects from the preparation program.

In order to be awarded Class A certification, students must (a) maintain a GPA of at least 3.0 on all courses with no grade below a "C", (b) receive a passing score on a comprehensive assessment documenting mastery of the curriculum, (c) successfully complete the internship and residency, (d) receive a passing score on the required Praxis exam, (e) complete State Department of Education certification application forms, and (f) complete a survey of special education course (SPE 300 or SPE 500) or its equivalent. The certification programs of the department have been designed to fulfill current requirements of the Alabama State Board of Education. These state requirements change from time to time and, accordingly, the department’s requirements and programs are subject to change.

Field experience objectives, including progression from observation through participation to leading behaviors, will be embedded in each course and assessed by the faculty member of record.

The program of study leading to Class A administrative certification is based on a cohort approach to instruction with cohorts being established annually. For admission forms and requirements, specific program parameters, departmental policies, and contact information can be found at the website for Educational Leadership, Policy & Technology Studies.
Educational Specialist in Educational Leadership/Class AA Certification

(30 semester hours). Students who earned initial credit toward Class AA professional certification during the Fall 1992 semester or later must enroll in and complete the EdS degree program. Courses used to qualify for a lower-level supporting certificate may not be used again in a higher-level certification program. Also, effective Fall 2010, students who are admitted to the program must (a) present an acceptable GRE or MAT score (see application policy), (b) hold master's-level certification in Instructional Leader, Principal, Superintendent, Superintendent/Principal, Educational Administrator, Supervisor (any subject and/or grade level), or Administrator of Career and Technical Education and (c) meet one of the following criteria: (1) Class A certification in Instructional Leadership earned after completing a redesigned program at an Alabama university, (2) currently serving as a superintendent, assistant or associate superintendent, principal, assistant principal, supervisor (any subject and/or grade level), administrator of career and technical education, coordinator, or evaluator; or three years of experience in an instructional leadership position. Admission and degree requirements for the Graduate School and for the College of Education are detailed in an earlier section of this catalog. Admission and degree requirements are subject to change and are under revision at the time of publication. Please check with the Office of Student Services & Certification or the Department of Educational Leadership, Policy, and Technology Studies for the most current information.

To be awarded Class AA certification, students must (a) earn a passing score on a comprehensive exam covering the content of the program, (b) maintain a GPA of at least 3.25 on all courses with no grade below a "C", (c) complete the State Department of Education certification application forms, and (d) complete the survey of special education course SPE 300 or SPE 500. Please note: classes taken for Class A certification and credits over six years old cannot be applied to this degree. The certification programs of the department have been designed to fulfill current requirements of the Alabama State Board of Education.

In order to maintain compliance with the Alabama Board of Education, admission and program requirements are subject to change. Admission forms and requirements, specific program parameters, departmental policies, and contact information can be found at the Department of Educational Leadership, Policy and Technology Studies website.

Educational Specialist in Educational Leadership/non-certification option

(30 semester hours). The Educational Specialist Program in Educational Leadership (non-certification) provides an option for aspiring educational leaders who are not seeking state administrative certification. It serves individuals who are preparing for organizational leadership positions in a variety of settings with a focus on becoming competent and creative leaders of learning. The program comprises four semesters of intensive coursework including a common introductory course about what it means to be an instructional leader and a culminating course experience that involves students in school-community partnerships. The cohort design allows students to take their beginning and culminating courses together, but provides options in selecting other coursework.

Additional requirements for the Graduate School (Degree Requirements) and the College of Education (Masters and Professional Certification) are detailed in earlier sections of this catalog.

EDUCATIONAL LEADERSHIP
Professor Bob L. Johnson, Jr., Office: 302 Graves Hall

Doctoral Degrees
Two doctoral degrees are offered in the Educational Leadership program.

As a professional degree, the Education Doctorate (Ed.D.) in educational leadership is designed to meet the needs of those individuals seeking to improve their knowledge and skills to become highly competent educational leader-practitioners at the state, district, school or classroom level. Toward these ends, the Ed.D. is designed to promote a standard of excellence intended to meet the growing demands faced by educational leaders in a context defined by instructional leadership, accountability for the quality of teaching and learning,
increased globalization, diversity, and the ongoing emergence/evolution of digital technologies.

A minimum of 72 semester credit hours beyond the Masters degree is required for completion of the Ed.D. program. These hours are distributed as follows. Students must successfully complete the 12 hour AEL Core plus 24 additional hours of AEL electives. A 12 hour set of Education Foundation courses is also required. Students may take any graduate level BEF or BEP course and/or any non-research methods courses outside of the ELPTS Department or College of Education to fulfill this requirement. Students must also complete 12 semester hours of Educational Research (BER) and enroll in a minimum of 12 hours of dissertation (AEL 699).

The primary purpose of the Doctor of Philosophy (Ph.D.) degree is to prepare students for careers in the professoriate or policy arena as an analyst, agency executive or consultant. As a result, the Ph.D. degree requires more extensive contact with and immersion in the university culture. This contact and immersion take the following form: more research course requirements (15 hours of coursework and 24 hours of dissertation research); an on-campus residency requirement; extensive interaction, dialogue and work with faculty on research projects; and expectations that students will present this research at conferences.

Program course requirements are the same for the Ph.D. and Ed.D. with the following exceptions: 1) A minimum of 76 hours beyond the Masters degree is required for the degree; 2) Ph.D. students are required to take only 12 graduate hours of AEL electives; 3) Ph.D. students are required to take 15 hours of research (BER); and 4) Ph.D. students are required to complete, at a minimum, 24 Dissertation hours (AEL 699).

Additional requirements for the Graduate School (Degree Requirements) and the College of Education (Doctoral Programs) are detailed in earlier sections of this catalog. Specific details for both programs can be viewed and downloaded at the AEL program website.

INSTRUCTIONAL LEADERSHIP
Professor John Petrovic (Social and Cultural Studies), Office: 307C Graves Hall
Professor Margaret Rice (Instructional Technology), Office: 315F Graves Hall

The Instructional Leadership Program is dedicated to the advancement of knowledge, the improvement of professional practice, and service to learning communities. We develop future scholars, researchers, and instructional leaders for schools, colleges and other learning institutions. Our work is guided by the principles of reflective practice, professional growth, individual responsibility, the pursuit of social justice, an ethic of caring, and a commitment to the communities we serve. The program differs from the one in educational administration in that it focuses primarily on the development of leaders with expertise in fields such as curriculum, instruction, supervision, technology, and the social and cultural factors influencing learning. We also focus on training for distributive and shared leadership teams.

Doctoral Degrees
The EdD in instructional leadership provides learning opportunities in the areas of policy, curriculum, supervision, and human resource and professional development for educators who hold or aspire to leadership responsibilities. Students who hold this degree are prepared to assume leadership and instructional positions in schools, educational organizations, community colleges and universities. A separate cohort is designed specifically to prepare future nurse education faculty.

The PhD in instructional leadership prepares educational leaders, scholar practitioners, policy makers, professors, and researchers who can utilize—and contribute to—knowledge of learning processes, pedagogy, and the social foundations of schooling. Courses focus on curriculum, professional development, supervision, learning, pedagogy, and questions of diversity and social justice. Throughout, the overarching aim is to develop the skills of inquiry and reflective decision making so that graduates are able to construct ethical and politically informed judgments that advance education while respecting diversity, honoring difference, and promoting social justice. The PhD offers optional concentrations in instructional technology (preparing future researchers, teachers, and corporate trainers in the field of...
computer assisted instruction) and the social and cultural foundations of education (preparing
students for academic positions in higher education).

**Instructional Leadership – Instructional Technology Concentration**
Professor Margaret Rice, Office: 315F Graves Hall

The technology course offerings include basic support courses for undergraduate and
graduate teacher education programs throughout the College of Education and for programs
in other units of the College and University. Students pursuing a PhD in instructional
leadership may choose a concentration in Instructional Technology.

Students pursuing alternative doctoral residency in the Instructional Technology concentration
of the Instructional Leadership PhD degree will enroll in 18 hours of approved graduate level
coursework across three consecutive semesters. The 18 hours of coursework must include at
least nine hours of approved coursework at the Tuscaloosa campus, three hours of
coursework in AIL691: Doctoral Seminar: Instructional Technology, and no more than six
hours of advisor approved online/distance education/Gadsden coursework.

**Instructional Leadership – Social and Cultural Studies Concentration**
Professor John Petrovic, Office: 307C Graves Hall

The social and cultural course offerings include basic support courses for undergraduate and
graduate teacher education programs throughout the College of Education and for programs
in other units of the College and University. These courses include studies in areas
foundational to work in education including educational policy, social theory and sociology,
philosophy, and history. Special emphasis is placed on critical examination of the relationships
between education and social justice in both U.S. and global contexts. Students pursuing a
PhD in instructional leadership may choose a concentration in Social and Cultural Studies in
Education.

Students pursuing alternate doctoral residency in the Social and Cultural Studies in Education
concentration (Instructional Leadership degree with a concentration in Social and Cultural
Studies in Education) will enroll in 18 hours of approved graduate level coursework across
three consecutive semesters. The 18 hours of coursework must include six of the twelve
hours of the doctoral core on the Tuscaloosa campus. Students may include up to six hours of
advisor approved online, distance education, hybrid, and/or Gadsden coursework. Students
may not take more than three hours of online or hybrid instruction in a single semester during
the residency period.

Additional requirements for the Graduate School (**Degree Requirements**) and the College of
Education (**Doctoral Degrees**) are detailed in earlier sections of this catalog.

**HIGHER EDUCATION ADMINISTRATION**
Professor Nathaniel Bray, Office: 328A Graves Hall

The Higher Education Administration Program is exclusively graduate-level; through its varied
course offerings and structured learning experiences, it meaningfully serves a broad clientele,
especially current and future administrators of two- and four-year colleges and universities.
Course offerings are designed primarily to train, sensitize, and broaden the information base
of administrators and personnel already affiliated with institutions of higher learning, and to
prepare others for employment with institutions of higher learning in Alabama, the Southeast,
and the nation. The program offerings also complement other courses of study undertaken by
graduate students pursuing other majors within the area, the College, and the University. The
program in higher education administration offers the following degrees: the MA, EdD, and
PhD.

Additional Requirements for the Graduate School (**Degree Requirements**) and the College of
Education (**Masters and Doctoral degrees**) are detailed in earlier sections of this catalog.
Additional information concerning admission and degree requirements may be outlined in the
individual program descriptions in this catalog.
THE UNIVERSITY OF ALABAMA GRADUATE CATALOG

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10.6.1 DEPARTMENT OF EDUCATIONAL LEADERSHIP, POLICY, AND TECHNOLOGY STUDIES COURSES

Course Descriptions (CAT)

CAT 520 Computer Graphics Education. Three hours.
Prerequisite: CAT 531 or CAT 532.
Application course dealing with the use of graphics in learning, including implications for designing materials for education and training applications. Core of course is student's individual product development and research.

CAT 531 Computer-Based Instructional Technologies. Three hours.
An introductory course for teacher educators in the fundamentals of computer applications for educational use. It covers historical and social contexts of computer development, fundamentals in computer systems, Macintosh and DOS, configuring hardware, and the use of word-processing, database, and spreadsheet software applications for personal productivity and educational uses.

CAT 532 Current and Emerging Instructional Technologies. Three hours.
Prerequisite: CAT 531.
The course focuses on the educational applications of emerging chronologies, including Internet, fax, bulletin boards, voice mail, and networks. Students will use electronic mail and transfer files through Internet. Production skills are required in desktop publishing and use of graphics, including draw and paint programs and animation. A significant part of the course concerns production in hypermedia software. Also, students will engage in the uses of telecommunications other than computer, such as one-way interactive satellite class, two-way video phone course sequence transmission, and two-way IITS instructional event.

CAT 533 Curriculum Integration of Technology. Three hours.
Prerequisite: CAT 532.
This course is a culminating course that will involve the production of technological pieces and uses of existing technologies for the development of learning activities appropriate for the student's grade level and subject matter.

CAT 534 Issues and Trends in Educational Technology. Three hours.
Study of current issues and trends affecting educational computing. Examines emerging technologies; legal, social, and ethical issues affecting technology; technology funding and grants; technology planning; professional development; and multicultural issues.

CAT 589 Practicum Research Educational Computer Technology. Three hours.
Prerequisites: CAT 531, and either CAT 532 or CAT 533.
Students pursue individual research in educational computer technology; they are required to implement, analyze, and report findings in APA format.

Course Descriptions (AEL)

AEL 500 Intro Educ Organ & Admin. Three hours.
An analysis of the general concepts and issues of organization, administration, and leadership in education.

AEL 505 The Educational Leader. Three hours.
An exploration of the relationship between leadership theory and the roles, functions, and tasks of school leaders. Emphasis on developing competencies required for leadership in the N –12 educational setting.

http://graduate.ua.edu/catalog/22500.html
AEL 510 Prin Curriculum Instruct. Three hours.
An examination of foundations, principles, and concepts inherent in the field of curriculum. Focuses on knowledge of and understanding about learning, and methods and strategies for program planning, design, implementation, and evaluation. The fit between the needs of the learner, a planned program of instruction, and an implemented program of instruction is examined critically.

AEL 520 Leadership for Communities and Stakeholders. Three hours.
Prerequisite: admission to MA degree program in Instructional Leadership.
A study of individual and group leadership skills for purposes of addressing issues that impact student learning, engaging families in decisions at the school and district levels, and building community support for schools.

AEL 521 Leadership for Continuous Improvement. Three hours.
Prerequisite: admission to MA degree program in Instructional Leadership.
This course is designed to prepare prospective educational administrators for grades P-12 to provide the instructional leadership for continuous improvement of schools. The course focuses on knowledge and understanding about learning, methods, and strategies for program planning, design, implementation, and evaluation. The fit among the needs of the learner, a planned program of instruction, and an implemented program of instruction is examined critically.

AEL 522 Leadership for Teaching and Learning. Three hours.
Prerequisites: admission to MA degree program in Instructional Leadership and AEL 521.
The course places emphasis on developing the school leader’s knowledge of teaching and learning, and her/his abilities to lead, coach, participate in, and enhance teacher dialogue about student learning. It includes study of newer research on learning (i.e., constructivist learning theory), leadership for collaborative learning communities, and study of strategies that teachers can use to ensure that all students learn, as well as use of lesson and test data to diagnose, plan and design targeted learning activities for individual and groups of students.

AEL 523 Human Resource Development. Three hours.
Prerequisites: admission to MA degree program in Instructional Leadership, AEL 521 and AEL 522.
A comprehensive study of the basic concepts of effective supervision, including supervisory roles and functions, communicative interaction, and formative and summative strategies for improving instruction. Focuses on practical application of approaches to, organization of, and techniques of supervision for use with individuals and groups to facilitate continued professional development and contribution to the educational enterprise. Graduate standing required.

AEL 524 Ethics and Law. Three hours.
Prerequisite: admission to MA degree program in Instructional Leadership.
A study of ethics and law as it relates to the educational leader’s role as the “first citizen” of the school/district community. Emphasis is on the development of effective instructional leaders who demonstrate honesty, integrity, and fairness to guide school policies and practices consistent with current legal and ethical standards for professional educators.

AEL 525 Management of Learning Organizations. Three hours.
Prerequisite: admission to MA degree program in Instructional Leadership.
This course is a study of the theories, principles, and practices of managing an educational organization. Emphasis will be on the practical management of the local school.

AEL 526 Data-Informed Decision-Making. Three hours.
Prerequisite: admission to MA degree program in Instructional Leadership.
AEL 526 is a course that uses school-based data as a vehicle to illustrate the applicability of decision-making models in the resolution of school problems.

http://graduate.ua.edu/catalog/22500.html
AEL 527 Internship in Instructional Leadership. One and a half hours.
Prerequisite: admission to MA degree program in Instructional Leadership
The course is designed to apply theory, knowledge, and skills in meaningful and practical
experiences in actual school settings. A residency of uninterrupted service of no less than ten
consecutive full days with students present is required.

AEL 552 Found Instruct Supervision. Three hours.

AEL 600 Introduction to Educational Law. Three hours.
An introduction to how legal methods and kinds of laws, such as torts, contracts, agency,
equity, and constitutional law, apply to educational situations. Students will be exposed to
research and will be tested on state and federal statutes, state and federal administrative law,
and case law.

AEL 602 Educational Leadership and School Restructuring. Three hours.
Prerequisites: permission of instructor
An inquiry into identification, analysis, and application of leadership theories and interpersonal
dynamics and the relationship of leadership theories to other disciplines. Implications of these
for school restructuring and change for the improvement of instruction are emphasized.

AEL 605 Internship in Educational Leadership. Three hours.
The application of theory, knowledge, and skills in authentic educational settings. Students
are required to complete two consecutive semesters of internship for a total of 6 hours of
credit.

AEL 608 Educational Finance: Theory and Practice. Three hours.
A study of litigation, legislation, and implementation of public-school finance programs in the
50 states. Concentrates on four aspects of equity: resource equity, input equity, output
equity, and tax equity.

AEL 610 Personnel Administration: Theory and Practice. Three hours.
A comprehensive analysis of personnel functions in educational administration, including
dimensions of personnel needs, fulfillment of those needs, and the maintenance and
improvement of personnel services.

AEL 611 Superintendency and the Leadership Team. Three hours.
An inquiry—utilizing the perspectives of effective delegation and participation—into the nature
of the superintendency and the development of a leadership team.

AEL 612 Instructional Supervision and Mentoring: Theory and Practice. Three hours.
Prerequisite: AEL 523 or permission of the instructor.
A comprehensive critical examination of advanced philosophy, theory, and research of
instructional supervision, including an interdisciplinary focus on forces impinging upon
instruction. Implications of these findings for individual and group development and the
improvement of instruction and the instructional environment are emphasized.

AEL 616 Operational and Strategic Planning: Theory and Practice. Three hours.
A focus on the major strategies and tactics of long-term and short-term planning for
education and other organizations. Integration of various planning functions is stressed. The
course includes 6 hours of field experience.

AEL 618 Advanced Educational Law. Three hours.
Prerequisite: AEL 524 or permission of the instructor.
Emphasizes original legal research by the student. After reviewing general principles of
educational law, each student selects a topic for intense research. With the instructor's
assistance, each student will prepare a publishable article on some area of educational law.
Proper use of legal notations, forms, and research methods is stressed.

AEL 619 Politics of Education. Three hours.
Prerequisite: Advanced graduate standing.
Study of politics as it relates to educational decision making, with emphasis on political
theory, history of politics in education, and the legislative process. Offered once during the academic year.

**AEL 620 Curriculum: Theory and Practice.** Three hours.
Prerequisite: AEL 521 or permission of the instructor.
Presents a synoptic overview of historical and contemporary discourses necessary to understand curriculum as a synergetic field of study and an area of professional practice. Emphasis is placed on the contributions of individual scholars and the 1970s shift in the field from traditionalist to reconceptualist perspectives. Applications to practice are explored.

**AEL 622 Staff Development.** Three hours.
Prerequisite: AEL 612.
A study of principles and techniques for the continued professional development of individuals and groups who are responsible for establishing learning environments. The course is designed for those in instructional leadership positions who are responsible for the development, implementation, and evaluation of staff development (in-service) programs, including conferences, workshops, single sessions, and comprehensive programs.

**AEL 624 Practicum in Educational Leadership.** Three hours.
Prerequisite: Completion of all AEL required courses.
Directed opportunities to use educational leadership knowledge and skills to design projects and solve problems. Students develop a field-based project that includes the identification and analysis of a local school or district problem and the implementation and evaluation of a solution to the identified problem.

**AEL 630 School-Community Partnerships.** Three hours.
This advanced course examines basic principles, strategies, and components of school and community partnerships and the obstacles to forging effective and successful partnerships from a solid theoretical foundation in community sociology and its relationship to school reform. In addition, it analyzes how social and cultural differences impact the ways in which business, schools, families/parents, and communities interact, relate, and conflict.

**AEL 631 Strategic Leadership.** Three hours.
Application of leadership theories to district level leadership practice, with an emphasis on strategies and tactics for planning. Includes field experience.
Prerequisites: Class A principal certificate and/or instructor permission

**AEL 632 Leading Learning Through the Curriculum.** Three hours.
This course emphasizes knowledge, skills, and understandings about curriculum discourses, and assumptions underlying historical, social, and contemporary thought, practice and research applying to curriculum leadership.
Prerequisites: Class A principal certification and AEL 521 or equivalent

**AEL 633 Leading Adult Learners.** Three hours.
Emphasis is on advanced study of leading learning communities, developing adult learners, and strategies for teachers to ensure all students learn.
Prerequisites: Class A principal certification and AEL 522, AEL 631, and/or instructor permission

**AEL 634 Develop. & Supervision of HR.** Three hours.
Analysis of personnel functions, emphasizing philosophy, theory, skills, and research on professional development for adult learners in professional learning communities.
Prerequisites: Class A principal certification and AEL 523, AEL 632, and/or instructor permission

**AEL 635 Ethical and Legal Issues.** Three hours.
Advanced ethics and law for school administrators with emphasis on relationships between these and policy for school leaders.
Prerequisites: Class A principal certification and/or instructor permission
AEL 636 School Finance and Financial Mgmt. Three hours.
This course provides an overview of school and school system business management and related technologies.
Prerequisites: Class A principal certification and/or instructor permission

AEL 637 Leadership and Social Systems. Three hours.
A study of the interplay between leader behavior and schools from social systems theory and practical implications for improving instruction.
Prerequisites: Class A principal certification and/or instructor permission

AEL 638 Solving Problems of Practice. Three hours.
Directed opportunities to use educational leadership knowledge and skills to design field-based projects and evaluate solutions.
Prerequisites: Class A principal certification and/or instructor permission

AEL 645 Int Comm & Collaboration. Three hours.
Study of research, literature, theory, and skills involved in interpersonal communications, conflict resolution, and collaboration within school settings. Prepares leaders to work in collaborative teams.
Prerequisites: Graduate status in ELPTS or permission

AEL 649 Advanced Research. Variable credit.
Directed research activities related to educational leadership topics. Enrollment is subject to program regulations and permission of the student's program committee. Credit is based on the nature and degree of student involvement.

AEL 650 Organizational Theory. Three hours (core course for PhD/EdD in educational administration).
An exploration of the relationship among concepts, generalizations, and theoretical models found in the behavioral and social sciences. The application of these to administrative practice in educational settings is addressed.

Prerequisite: AEL 610 or permission of the instructor.
An analysis of the major functions involved in administering a staff personnel program. Stresses the interrelationship of functions and focuses on the administrative level and the organizational development/human resource development relationship.

AEL 661 Major Issues and Trends. Three hours.
An advanced analysis of current issues and trends impacting educational organizations and the leaders of those organizations.

AEL 664 The Dynamics of Change. Three hours.
Components of change will be identified and theories of social and personal dynamics will be adapted and applied to planned programs of change in education.

AEL 667 Multicultural and Social Education for Leadership Personnel. Three hours.
An advanced inquiry into contemporary social and cultural dimensions of education and their relationships to leadership. Includes issues of diversity, gender, ethnicity, pluralism, and equality.

AEL 669 Curriculum and the Study of Schooling. Three hours.
Prerequisite: AEL 620 or permission of the instructor. An inquiry into the curriculum of schooling. Critical analysis of the relationship of curricular decision making to social and political systems and other school context variables is emphasized. Application is made to contemporary issues and problems in school leadership and restructuring.

AEL 671 Survey of Instructional Supervision. Three hours.
Prerequisite: AEL 612 or permission of the instructor.
A critical examination, interpretation, and evaluation of significant current and classical writings in the field of instructional supervision with particular emphasis on research findings,
the emergence of instructional trends and issues across the literature, and applications for effective leadership of instructional supervision.

This is a course in organizational theory that continues the work begun in AEL 650. The course presents current theoretical perspectives and develops skills in reading research literature and framing dissertation problems.

**AEL 681 Ethics and Education.** Three hours.  
Doctoral core course. An exploration and examination of traditional and contemporary ethical issues confronting educational leaders, managers, and teachers at all levels of the educational process. Emphasis on an interdisciplinary approach to foundations in ethical theory and establishing a conceptual framework for the resolution of moral and ethical questions prevalent across the education spectrum.

**AEL 682 Leadership and Organizations: Theory and Applications.** Three hours (core course for PhD/EdD in educational administration).  
Prerequisite: AEL 602 or permission of the instructor.  
An examination of historical and contemporary theories, models, concepts, and practices for effective and efficient approaches to leadership within organizations and how these apply to educational settings.

**AEL 683 Contemporary Political and Economic Issues in Education.** Three hours (core course for PhD/EdD in educational administration).  
An exploration of contemporary economic and political dimensions of education and their relationships to leadership. Includes issues related to issues of democracy, governance, power, equity, and choice.

**AEL 695 Seminar in Curriculum Leadership.** Three hours.  
An advanced seminar for students to explore, discuss, and interpret contemporary curriculum practice and research. Provides students with opportunities for critical inquiry into an area of specialized need and interest.

**AEL 697 Seminar in Instructional Leadership.** Three hours.  
An advanced seminar for students to explore, discuss, and interpret contemporary curriculum practice and research in instructional leadership. Provides students with opportunities for critical inquiry into an area of specialized need and interest.

**AEL 699 Dissertation Research.** Variable credit.  
Twelve semester hours (EdD) or 24 semester hours (PhD) required. Directed dissertation research in the area of educational leadership. Student must maintain continuous enrollment for a minimum of 3 semester hours per semester until the dissertation is completed. Enrollment is subject to program regulations and permission of the student's dissertation committee.

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**Course Descriptions (AHE)**

**AHE 500 Perspectives on Higher Education Administration.** Three hours.  
How higher education has been shaped by the major trends in American society, how it has contributed to the development of this country, and what may be expected of higher education in the future. Higher education is also viewed in institutional and conceptual forms from the perspective of students, faculty, and administrators.

**AHE 507 Student Development Theory I.** Three hours.  
Introduction to the theoretical basis for the delivery of services through organizational student development, and a study of the research basis for student development.

**AHE 510 The Community and Junior College.** Three hours.  
An overview of the development, format, issues, and purposes of the contemporary community and junior college.
AHE 520 The Student in Higher Education. Three hours.
A survey of the needs, characteristics, and cultures of the American college student within various types of higher education institutions.

AHE 521 Student Affairs. Three hours.
An overview of the organization, personnel, and practices of student affairs and related higher education functions in U.S. colleges and universities. The course is designed to increase student understanding of how student services, student activities, and student development tasks are organized, administered, and assessed. Students will explore the main issues, roles, constituencies and expectations affecting individual professionals as well as the profession as a whole.

AHE 530 Law in Higher Education. Three hours.
Investigates and explicates the structure and background of law and equity in higher education, with emphasis on how statutory law, administrative law, and case law respond to and affect faculty, students, administrators, and trustees. Constitutional law, contracts, torts, the law of private associations, civil rights statutes, executive orders, injunctions, specific performance, corporate and partnership law, law of agency, and laws on liability are studied as they apply to higher education.

AHE 540 Organization and Administration of Higher Education. Three hours.
Overview of the organization, administrative roles and positions, administrative process, and administrator relationships within various institutions of higher learning.

AHE 548 Leadership in Higher Education. Three hours.
Overview of the theory, practice, and issues related to leadership in American Higher Education.

AHE 550 Finance and Business Affairs in Higher Education. Three hours.
An overview of the budgeting processes, sources of revenue, types of expenditures, and issues and innovations in financing various types of contemporary institutions of higher education. Also a survey of the various business and planning operations vital to the operation of colleges and universities.

AHE 560 Comparative Higher Education. Three hours.
This course is designed to provide a cross-cultural perspective on issues related to higher education throughout the world. The course will focus on topics such as reform, students and student activism, internal and external governance of universities, unions, and the academic profession in key world regions.

AHE 561 Case Studies in Higher Education. Three hours.
This course is designed to enhance an understanding of decision making in higher education. Based on case studies, students will analyze, propose policies, generate action plans and implementation procedures, and assess the potential consequences of their administrative decisions.

AHE 590 Independent Study in Higher Education. Three hours.
Prerequisite: Permission of the instructor.
Directed independent study in the literature of higher education, designed for the student seeking a minor or pursuing master's work in the program in higher education (AHE).

AHE 591 Seminar in Higher Education. Three hours.
A topical seminar on a current issue or problem in higher or postsecondary education. On occasion, the seminar involves travel or on-site visitations to institutions or oversight bodies.

AHE 592 Internship in Higher Education. Three hours.
Prerequisite: Admitted to the Higher Education Program
The application of theory, knowledge, and skills in authentic educational settings. Students are required to complete one semester of internship for a total of three hours credit.
AHE 599 Thesis Research. Three to six hours.
Directed thesis research.

AHE 601 Professional Seminar in Higher Education. Three hours.
This course is designed for students newly admitted to the doctoral program in higher education administration. As such, the seminar concentrates on issues and concerns that arise as part of the doctoral experience. Course activities and experiences may vary according to the professional experience and academic background of course participants.

AHE 602 Problems in Higher Education. Three hours.
Seminar studying the current issues and trends related to higher education.

AHE 603 College and University Teaching. Three hours.
An intensive graduate seminar that provides an overview of the issues, principles, and practices associated with effective college teaching. Topics include learning and diversity; teaching models and strategies; teacher and student behaviors and learning outcomes; and instructional improvement strategies.

AHE 607 Student Development Theory II. Three hours. Provides a comprehensive study of student growth and development during the college years. The course is designed to address professionals in student affairs and higher education administration.

AHE 610 Academic Cultures and Learning in Academe. Three hours.
An intensive examination of the student, faculty, and administrative cultures in higher education environments. The impact of various internal and external factors on institutional culture and behavior will also be studied, particularly as they relate to teaching, learning, research, and service.

AHE 621 Power, Politics, and Change in Higher Education Systems. Three hours.
A study of higher education institutions as complex organizations within a framework of local, state, and federal domains. Attention is focused on the institution as a dynamic political entity that continually undergoes change. State-level coordination and systems behavior are also examined.

AHE 625 Community College Leadership. Three hours.
This course provides an overview of issues pertaining to leadership in American community colleges.

AHE 640 Organizational Change in Higher Education. Three hours.
Colleges and universities face tremendous challenges; the need for change—and for change agents—has never been greater. This course examines organizational change both theoretically and practically in higher education.

AHE 641 Personnel and Human Resource Management in Higher Education. Three hours.
Need for and types of personnel; recruitment, advancement, and security of personnel; salaries, wages, and benefits; and problems peculiar to college personnel.

AHE 642 Institutional Research and Assessment in Higher Education. Three hours.
An overview of the institutional research and analysis techniques utilized in contemporary higher education. The course is configured for those with an interest in conducting institutional research and/or working in offices of institutional research on the campus, system, and/or state level.

AHE 643 Grant Writing and Contract Management. Three hours.
Prerequisite: AHE 630 or permission of the instructor.
An introduction to the legal principles of contracts and grants in higher education, including how to identify funding sources, make the proposal, and manage the project. Statutory, administrative, and case law will be studied as they relate to making the proposal and managing the project.
AHE 644 Academic Program Development and Evaluation in Higher Education. Three hours. Design and management of academic programs; study of institutional structures for academic affairs; practice in program review for instructional improvement; and overview of graduate programs (general and liberal education, as well as occupational and professional education).

AHE 670 Higher Education Policy. Three hours. This course will introduce students to the essential elements of higher education policy and finance. Students will examine the main financing options of colleges and universities, college costs and pricing, financial aid policy, and emerging policy issues.

AHE 680 Reading Research in Higher Education. Three hours. The purpose of this course is to provide students with skills that enable them to understand and synthesize current research in higher education.

AHE 688 Mentored Teaching. Three hours. This course provides students with a mentored experiential learning opportunity to develop competency and mastery in course construction and delivery in the higher education environment.

AHE 689 Mentored Research. Three hours. This course provides students with a mentored experiential learning opportunity to develop competency and mastery in research and analytical skills. To be taken at or near the end of student’s research requirements. (To be taken at or near the end of student’s research requirements.)

AHE 690 Directed Doctoral Study in Higher Education. Two to six hours. Prerequisites: Permission of the instructor and prior approval of study topic. Directed individual study and analysis of a problem confronting higher education. Note: Frequently, special one-time-only seminars focusing on a particular aspect of higher education are offered by program faculty under this course number.

AHE 699 Dissertation Research. Three to twelve hours. Directed dissertation research in the field of higher education. Enrollment is subject to program regulations and permission of the student's dissertation committee chairperson. Also offered in summer school.

Course Descriptions (AIL)

AIL 600 Integration of Technology in Education and Training. Three hours. An examination of advanced applications of current and emerging instructional technological applications in a variety of settings and in the context of various fields of study and job environments. Technologies and applications addressed in current course include computers, the Internet, presentation media, and multimedia. Cognitive, product, and skill competencies are included. Cognitive competencies are integrated into product and skills evaluations. Products are required to reflect some competencies, while skills competencies are either observed directly or inferred from the products.

AIL 601 Theories of Learning Applied to Technological Instruction. Three hours. Advanced theory and applications of educational technology. Including the effects of technology on thinking and learning, and the effects of technology in problem solving and other higher-level thinking skills, the course examines current research on computerized learning (CAI, simulation, and tutorials) and other relevant topics such as virtual reality, games and gaming theory, hypertext (design and comprehension), presentation software, groupware for cooperative learning, and telecommunications (distant and/or distributed learning).

AIL 602 Electronic Instructional Design. Three hours. Designed to develop basic knowledge and skills for electronic instructional design—analysis, design, production, evaluation, and revision—for specific electronic projects.
AIL 603 Telecommunications and Networking. Three hours. 
Designed to explore design, layout, and installation of local and wide area networks. 
Addresses topologies, ethernet standards, physical layer, network operating software, data-link layer, file server, network cards, hubs, peripherals, routers, and other network operations.

AIL 604 Distance Technologies. Three hours. 
Prepares students with knowledge and skills in methods of distance education, which incorporates telecommunications and computer technology to instruct students at remote locations or to serve as an adjunct to classroom instruction. The technology used includes telephony, cable television, satellite communications, videocassettes, videoconferencing, computer-mediated instruction, and/or online computer communication via the Internet.

AIL 605 Interactive Multimedia Process. Three hours. 
Prepares students with knowledge and skills in modeling, simulation, testing, or analysis or training in real-world contexts using interactive multimedia processes.

AIL 606 Software Technology. Three hours. 
Intended for students who have had some prior programming experience; otherwise, students will need to develop competencies prior to taking this course. Issues include matching the capabilities of the medium to the intellectual structure of the subject, who directs the interaction between human and computer; the size of the intellectual field; and pedagogical concerns in choosing the operations of a software environment. Students are expected to design and complete a project at the end of the course.

AIL 607 Readings in Instruct. Tech. Three hours. 
This course is designed to aid students in understanding and synthesizing research and developing theoretical approaches to the study of instructional technology. 
Prerequisites: Admission to the Graduate School

AIL 630 Technology Management. Three hours. 
This course introduces learners to theories and models for managing technology as an instrument of change and performance improvement in schools and organizations.

AIL 631 Administrative Technology. Three hours. 
This course introduces learners to the primary administrative technologies available for administrators and the critical technology issues educational and organizational leaders face.

AIL 689 Practicum Instructional Tech. Three to six hours. 
Students pursue research in the Instructional Technology program. They are required to develop, implement, and analyze research; and report findings in APA format.

AIL 690 Sem Instructional Technology. Three hours. 
Provides a critical analysis of technology, focusing on the ways (positive and negative) it affects society and schooling. Provides analysis of technology’s role in informing/reforming educational practices, policy, and theory. Provides practical application of technology for educators (administrators, teachers, and other leaders in the education field). Provides an examination of extant literature of technology in educaiton, including its uses, effectiveness, and drawbacks.

This doctoral seminar presents opportunities to study or work independently on topics or projects of collective concern in the IT doctoral program.

Course Descriptions (BEF)

BEF 503 History of American Education. Three hours. 
An interpretive history of the educational and social movements and conflicts leading to understanding contemporary issues of educational aims, curriculum, teaching methodology,
administrative policy, and the professionalization of teaching. Offered in alternate semesters and in summer school.

**BEF 504 Philosophy of Education.** Three hours.
An examination into the meaning and purpose of education in light of major philosophical problems of knowledge, value, and reality. Offered in alternate semesters and in summer school.

**BEF 507 Sociology of Education.** Three hours.
A sociological emphasis on cultural factors (such as ethnic background; socioeconomic status; family, peers, and community; and sex-role stereotyping) that influence education in a pluralistic society.

**BEF 510 Social and Philosophical Foundations of Education.** Three hours.
Prerequisite: Admission to an alternative certification program or permission of the instructor. Education is necessarily concerned with issues of value, knowledge, and reality—philosophy. Yet these concerns are always understood from the vantage point of cultures in transition within the framework of a social tradition—sociology and history. This course examines the development of the public school in relation to the social, cultural, and intellectual makeup of the nation as a whole.

**BEF 512 Church, State, and the School.** Three hours.
A critical interpretation of the First Amendment and the separation of church and state in American education.

**BEF 534 Multicultural Education.** Three hours.
Selected aspects of the anthropological and sociological foundations of education, with a critical evaluation of their relevance for increasing and/or enhancing multicultural understanding.

**BEF 535 History of American Higher Education.** Three hours.
An examination into the meaning and purpose of American higher education in light of the historical influences on the development of colleges and universities.

**BEF 575 Foundations of Education through Film.** Three hours.
One of the most powerful media for awakening and reflecting on ideas is film. This course uses various films with educational themes to examine social and philosophical issues in education.

**BEF 581 Educational Policy and Reform.** Three hours.
A focus on the relation of the public school to the state, on the principles of education, and on the possibilities for reform.

**BEF 585 Language Politics and Education.** Three hours.
Course covers the history and politics behind the English-only movement and its effect on education policy for language minority students. Informed by international comparisons, second language acquisition theory, and effectiveness studies, the pros/cons of bilingual and English-only policies are analyzed.

**BEF 599 Thesis Research.** Three to six hours.

**BEF 607 Readings in Sociology of Education.** Three hours.
Individualized readings in the sociology of education, with a focus on the educator as reflective practitioner and facilitator of learning.

**BEF 639 Educational Theory and Policy.** Three hours.
A critique of educational theory—learning, curricular, instructional, administrative—and its implications for policy making.

**BEF 640 Studies in the History of Education.** Three hours.
A critical examination of significant events, movements, or individuals in the history of
education.

**BEF 641 Studies in the Social Foundations of Education.** Three hours.
A special topics course providing an in-depth analysis of important individuals, theories, and contemporary issues in the social foundations of education.

**BEF 642 Studies in the Philosophy of Education.** Three hours.
This course provides in-depth analyses of important individuals, ideas, or concepts that have helped to develop, expand, or shed light on our philosophical understandings of the myriad and contested purposes, policies, and practices of schooling.

**BEF 644 Philosophy of Science and Its Relation to Educational Research.** Three hours.
An inquiry into the basic assumptions and principles underlying scientific research in education. Offered spring semester.

**BEF 650 Critical Race Theory in Educ.** Three hours.
This course explores the history, theoretical underpinnings and implications of Critical Race Theory for the field of education.

**BEF 653 History of American Higher Education.** Three hours.
A critical interpretation of the institutional development of American higher education and its cultural and intellectual roots.

**BEF 654 Philosophy and American Higher Education.** Three hours.
An analysis of the language, concepts, and value judgments embedded in higher-education policy issues.

**BEF 667 Multicultural and Social Educations for Leadership Personnel.** Three hours.
An advanced inquiry into contemporary social and cultural dimensions of education and their relationships to leadership. Includes issues of diversity, gender, ethnicity, pluralism, and equality.

**BEF 681 Ethics and Education.** Three hours.
An exploration and examination of traditional and contemporary ethical issues confronting educational leaders, managers, and teachers at all levels of the educational process. Emphasis on an interdisciplinary approach to foundations in ethical theory and establishing a conceptual framework for the resolution of moral and ethical questions prevalent across the educational spectrum.

**BEF 698 Non-Dissertation Research.** One hour.
Individual research in history, philosophy, or sociology of education.
COUNSELOR EDUCATION
(School Counseling, Rehabilitation Counseling, and Clinical Mental Health Counseling)
Professor Joy Burnham, Counselor Education, Office: 315C Graves Hall

Three study options in the Counselor Education Program lead to the MA and EdS degrees and provide the professional preparation necessary for work in schools, colleges, rehabilitation, and other agency and mental health settings. The PhD degree is also offered in Counselor Education. Certification programs for school counselors are available at the Class A and Class AA levels. Courses used to qualify for a lower-level supporting certificate may not be used again in a higher-level certification program.

Because of the necessarily heavy emphasis at the entry level upon practicum and internship experiences, the MA programs in School Counseling and Rehabilitation Counseling require a minimum of 48 semester hours of study. The Clinical Mental Health Counseling master's degree requires a minimum of 60 semester hours. No thesis is required in any of the MA programs.

The Council for Accreditation of Counseling and Related Programs (CACREP), a specialized accrediting body recognized by the Commission on Higher Education Accreditation (CHEA), has conferred accreditation on the following: Clinical Mental Health Counseling (MA), School Counseling (MA), and Counselor Education (PhD). The Council on Rehabilitation Education (CORE), also recognized by CHEA, has conferred accreditation for Rehabilitation Counseling (MA).

Cohort admission decisions are made twice annually (November and April). Admission and degree requirements specific to the program and in addition to those of the Graduate School, College, and department include the following:

Admission for Master's Degrees
Admission to pursue a master's degree in any track within the program in Counselor Education is based upon success in admission for graduate study with the Graduate School. No additional program requirements are expected beyond these minimum standards.

Admission for Educational Specialist Degree
Admission to pursue an educational specialist degree in Counselor Education is based upon success in admission for graduate study with the Graduate School and completion of a master's degree in counseling. Individuals pursuing Class AA certification in School Counseling must hold a valid Class A (master’s level) certificate as a School Counselor and two years of full-time acceptable experience.

Admission for Doctoral Degrees
Admission to pursue a doctoral degree in Counselor Education is a two-step procedure. Unconditional admission by the Graduate School is only the initial step for those seeking the doctoral degree. Within this step, students are engaged in post-master's study and are subject to scrutiny and review by program faculty for their suitability for doctoral study. An applicant for doctoral study must (a) possess a completed master's degree in Counselor Education; (b) when necessary, complete supplemental master's-equivalency courses to comply with the CACREP-accredited course of study for the master's degree; and (c) successfully complete the doctoral screening interview for formal pursuit of the doctoral degree in Counselor Education. Course credit in post-master's study prior to the screening interview may be used to fulfill doctoral degree requirements only after supplemental master's-equivalency study is completed and a successful screening interview is conducted.
Additional information is in the Admission Criteria and the College of Education (General Admission) sections of this catalog.

**Degree Requirements**

Degree requirements are noted on the official Plan of Study for the various degrees/tracks. These documents are available from the chairperson or administrative staff for the department.

All doctoral students must have a completed Plan of Study approved by the Graduate School no later than the semester during which the student will complete 30 semester hours of UA and/or transfer credit for the doctoral degree. Otherwise, a "hold" may be placed on future registrations.

If later there are changes in the Plan of Study, the student simply submits an amended plan of study to the Graduate School at the time the student applies for admission to candidacy for the degree. Admission to Candidacy forms are on the Graduate School's website.

A department-approved Admission to Candidacy for the Doctoral Degree is submitted to the Graduate School as soon as possible after passing the comprehensive (preliminary) examination. The application for Admission to Candidacy for the master's degree should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama. Requirements for Admission to Candidacy for the EdS Degree are the same as those for the master's degree in the same area. See the online Graduate Catalog (Sec. 4.9.3) for details on plan of study, admission to candidacy, and all other degree requirements.

**Alternative Doctoral Residency in Counselor Education**

The required doctoral residency may be met through a combination of traditional campus classes and online classes in Counselor Education. Students will complete a minimum of nine (9) semester hours in each of the two contiguous residency semesters/terms of their doctoral study. No more than three (3) semester hours of online graduate course work in Counselor Education may be taken during either of the nine-hour residency semesters/terms.

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**EDUCATIONAL PSYCHOLOGY**

*Professor Stephen Thoma, Office: 310 Carmichael Hall*

The University of Alabama Educational Psychology Program admits candidates to the master’s (MA), educational specialist (EdS), doctor of education (EdD) and PhD graduate degree programs. The mission of the program is to provide students with a thorough understanding of the theory and research related to learners, learning and developmental processes. All degree programs reflect this mission and prepare students for careers as faculty members within academic settings, researchers in agencies or businesses and school practitioners. The program invites applications from all potential students, especially those in underrepresented populations.

The MA in Educational Psychology provides an advanced introduction to the field. Students may select a thesis and nonthesis option. There are also two MA options offered in collaboration with educational research. These options are: Learning and Evaluation (thesis and nonthesis options) and program evaluation (nonthesis only). The EdS degree is designed for practitioners who desire advanced training beyond the MA. Practitioners who wish to obtain an advanced terminal degree may opt for the EdD. The PhD is an advanced research degree and is designed specifically for students interested in careers within academic and research settings. PhD students may choose specializations in: (a) learning and motivation or (b) human development. The human development specialization is offered in collaboration with the Department of Human Development and Family Studies in the College of Human Environmental Sciences.

**Admission Requirements**
Statement of purpose and letters of recommendation consistent with goals of the program, scores above the 50th percentile on the GRE or MAT, and a GPA of 3.0 on a 4.0 scale are needed for unconditional admission. Conditional admission will be granted in some circumstances. Prospective students are encouraged to complete their applications by January 15 for admission the following fall. Additional information is in the Admission Criteria section of this catalog.

**Degree Requirements**
Masters degrees require 30–33 graduate credit hours. EdS degrees require 30–33 hours beyond the master's. Doctoral degrees require 72 or more hours beyond the master's.

Additional information is in the Degree Requirements section of this catalog.

**RESEARCH METHODOLOGY**
*Professor Rick Houser, Office: 306C Carmichael Hall*

The primary mission of the Educational Research Program is to offer a quality graduate program that prepares scholars to critically engage with educational research and evaluation, develop appropriate and innovative research designs, and contribute conceptually sound analyses to the overlapping fields of education, the social sciences, and the health sciences.

The program in educational research offers the PhD in educational research and post-Masters certificate in qualitative or quantitative research. There is an EdS offered in conjunction with Educational Psychology. There are also two MA options offered in collaboration with educational psychology. These options are: Learning and Evaluation (thesis and nonthesis options) and program evaluation (nnonthesis only). The degrees require coursework in educational statistics, assessment/measurement, program evaluation, and qualitative research. A student may choose to specialize in educational statistics, program evaluation, assessment/measurement, research methodology, or qualitative research at the PhD level. Field experiences are required as part of the program.

**Admission for Educational Specialist Degree, EdS**
Admission to pursue an educational specialist degree in educational psychology (Educational Research emphasis) is based upon success in admission for graduate study with the Graduate School as well as the following: completion of a master's degree in the behavioral sciences, education, math, or statistics.

**Graduate Certificate in Qualitative Research**
The Graduate Certificate in Qualitative Research is a 15-credit course sequence that integrates theoretical knowledge with practical application, and field-based experience. Students who complete the certificate will have developed the methodological expertise and background necessary to be recognized as an emerging scholar in the field of qualitative inquiry. Though this certificate is housed in the College of Education, students from all disciplines are welcome to apply.

**Course Requirements:**
BER 632 Qualitative Research II  
BER 633 Qualitative Research III  
BER 630 Case Study  
BER 687 Field Experience  
BER 695 Special Topics  
Total Hours: 15

**How to Apply:**
1) Apply through the Graduate School's On-line Application Center.  
2) Select the Qualitative Research Certificate Program when applying

Application Materials include:
1) Statement of Purpose focusing on the student's goals in pursuing a Qualitative Research certificate;  
2) Writing Sample submitted directly to the department for faculty consideration

http://graduate.ua.edu/catalog/22600.html
**General Requirements:**

- Students must have a Masters degree in education (or a related field) and be accepted to the Qualitative Research non-degree certificate program by the Graduate School and departmental faculty.
- Applications will consist of evidence of having a Masters degree, a statement of purpose, and writing sample.
- Minimum Required Hours: 15.
- Certificate completion will be monitored by certificate program administrators.

**Certificate Completion Requirements:**

1) All courses listed above
2) Capstone Presentation

**Time Limit:** 6 Years.

You may contact Dr. Aaron Kuntz (akuntz@bamaed.ua.edu) for more information.

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**Graduate Certificate in Quantitative Educational Research**

The Graduate Certificate in Quantitative Educational Research places an emphasis on acquiring the skills necessary to not only complete statistical calculations, but to know how and when to apply and use appropriate calculations. This 15 credit-hour certificate prepares students from various disciplines to conduct research that documents the effects of educational programs and school outcomes. The courses required for this certificate are advanced educational research/statistics courses and provide those completing the certificate with significant and valuable knowledge and skills beyond what is required for typical degree requirements.

**Course Requirements:**

- Either BER 641 Multivariate quantitative methods or BER 642 advanced Regression Methods
- BER 645 Advanced Experimental Design
- BER 658 Advanced Measurement

Choose two of the following:

- BER 603 Survey Research in Education
- BER 646 Structural Equation Modeling
- BER 660 Evaluation I: Evaluation Theory and Practice
- BER 695 Special Topics-Quantitative Methods

**Total Hours: 15**

**How to Apply:**

1) Apply through the Graduate School’s On-line Application Center.
2) Select the Quantitative Educational Research Certificate Program when applying.

**Application Materials include:**

1) Statement of Purpose focusing on the student’s goals in pursuing a Quantitative Research certificate;
2) Evidence of prerequisite research/statistics courses comparable to BER 640 Quantitative Research II, must have achieved a grade of B or better in prerequisite research courses.

**General Requirements:**

- Students must have a Masters degree in education (or a related field) and be accepted to the Quantitative Research non-degree certificate program by the Graduate School and departmental faculty.
- Applications will consist of evidence of having a Masters degree, a statement of purpose, and evidence of prerequisite courses.
- Minimum Required Hours: 15.
- Certificate completion will be monitored by certificate program administrators.

**Certificate Completion Requirements:**

1) All courses listed above

**Time Limit:** 6 Years.

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http://graduate.ua.edu/catalog/22600.html
You may contact Dr. Jamie Mills about enrolling in this certificate: jmills@bamaed.ua.edu

**Admission for doctoral degree, PhD**
The doctoral program in Educational Research requires a Master's degree for doctoral admission. Completion of a master's degree in: the behavioral sciences, education, math, or statistics is recommended. Additional information is in the [Admission Criteria](#) section of this catalog.

**Degree requirements for the doctoral degree, PhD**
Degree requirements are available from the program coordinator or administrative staff for the department. Degree requirements are noted on the official Plan of Study for the various degrees/tracks. These documents are available from the chairperson or administrative staff for the department.

All doctoral students must have a completed Plan of Study approved by the Graduate School no later than the semester during which the student will complete 30 semester hours of UA and/or transfer credit for the doctoral degree. Otherwise, a "hold" may be placed on future registrations.

A department-approved [Admission to Candidacy for the Doctoral Degree](#) is submitted to the Graduate School as soon as possible after passing the comprehensive (preliminary) examination. Additional information concerning Plan of Study, admission to candidacy and all other requirements including those for the EdS is in the [Degree Requirements](#) section of this catalog.

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**SCHOOL PSYCHOLOGY**

*Professor Patti Harrison, Office: 306 Carmichael Hall*

The School Psychology Program is designed to provide exemplary graduate training in research, application, and practice related to learning, development, and mental health of children and youth, as well as their families, educators, and other professionals who work with them. The program also serves graduate students and faculty throughout the College of Education and other colleges by providing coursework, consultation, and doctoral minors. The EdS and PhD degrees in the School Psychology Program hold full approval status from the National Association of School Psychologists and national recognition by NCATE.

The degrees from the School Psychology Program may lead to state and national credentials. Students who obtain the EdS and PhD degrees in the School Psychology Program are eligible for the National Certification in School Psychology (NCSP), following successful completion of the national school psychologist PRAXIS-II examination and internship. The NCSP is used by many states as one possible route to grant state certification in school psychology. Requirements for certification and licensure in school psychology vary from state to state. Students are expected to determine the requirements in the state or states in which they are interested in practicing before beginning the program.

Requirements for certification by the Alabama Department of Education are found at [http://tcert.alsde.edu/Portal/Public/Pages/Services/Certification.aspx](http://tcert.alsde.edu/Portal/Public/Pages/Services/Certification.aspx). EdS and PhD degree graduates of the School Psychology program who obtain the NCSP may meet requirements for the Alabama AA certificate in School Psychology using the Nationally Certified School Psychologist Approach described at [http://public.alsde.edu/office/otl/tc/Nationally%20Certified%20School%20Psychologist%20Approach/Forms/AllItems.aspx](http://public.alsde.edu/office/otl/tc/Nationally%20Certified%20School%20Psychologist%20Approach/Forms/AllItems.aspx). The Alabama State-approved Program Approach also may be used by graduates of the School Psychology program, if the prerequisites are met. Graduates who obtain the MA degree in Educational Psychology-School Psychometry may be eligible for Alabama Class A Certification in School Psychology if the following prerequisites are met: (a) baccalaureate-level certification in a teaching field and (b) two years of satisfactory educational experience, and (c) a passing score on comprehensive exams. Graduates who obtain the EdS in Educational Psychology-School Psychology and the PhD degrees in School Psychology may be eligible for the Alabama State-approved Program Approach for the Alabama Class AA Certification in School Psychology if the following prerequisites are met: (a) baccalaureate-level certification...
in a teaching field, (b) prior certification as a school psychometrist, (c) two years of satisfactory educational experience, and (d) a passing score on the state content assessment.

Requirements for the Graduate School (Degree Requirements) and the College of Education (Master’s, Professional Certification, EdS, Doctoral) are detailed in earlier sections of this catalog. For specific program requirements visit the College of Education Programs web site or for a student handbook and additional information, email or call: Chairperson, School Psychology, The University of Alabama, College of Education, Box 870231, Tuscaloosa, AL 35487-0231; phone (205) 348-7575; fax (205) 348-0683; program office, 306 Carmichael Hall, email: pharriso@bamaed.ua.edu.
THE UNIVERSITY OF ALABAMA GRADUATE CATALOG

Table of Contents > College of Education > Courses

10.7.1 DEPARTMENT OF EDUCATIONAL STUDIES IN PSYCHOLOGY, RESEARCH METHODOLOGY, AND COUNSELING COURSES

Course Descriptions (BCE)

BCE 511 Principles of Guidance. Three hours. 
Explores the rationale for guidance by examining human development and sociological, psychological, and philosophical bases for guidance. Provides awareness of services by surveying components of guidance programs. Offered fall semester.

Introduction to counseling, counseling theories, and the counseling relationship; and an overview of the counseling process. Offered fall and spring semesters.

BCE 513 Career Development. Three hours. 
An introduction for counselors and teachers to career development concepts, labor force information, and other resources needed to help persons with career planning and decision making. Offered spring semester.

BCE 514 Prepracticum in Counseling. Three hours. 
An experiential course involving applied elements of theoretical models and customary helping skills to orient and prepare students for their initial supervised work with counseling clients. Offered fall and spring semesters.

BCE 515 Practicum in Counseling I. Three hours. 
Prerequisite: BCE 514 and permission of the faculty. 
Laboratory training in attending, listening, and influencing skills. Supervised experience in counseling. Offered fall and spring semesters.

BCE 516 Practicum in Counseling II. Three hours. 
Prerequisites: BCE 515 and permission of the faculty. 
Supervised practice in counseling. Offered fall and spring semesters.

BCE 518 Introduction to Clinical Mental Health Counseling. Three hours. 
An overview of the functions and roles of the counselor in various clinical mental health practice settings. Offered fall semester.

BCE 521 Group Procedures in Counseling and Guidance. Three hours. 
Prerequisite: Permission of the faculty. 
Background in group methods, including group guidance, group counseling, and group dynamics. One-half of class time is spent in a laboratory experience during which each student is provided an opportunity to function in a group. Offered fall and spring semesters and in summer school.

BCE 522 Individual and Group Appraisal. Three hours. 
Prerequisite: BER 540. 
An overview of measurement methods, practice in administration and interpretation of standardized tests, and evaluation of tests and testing programs for counseling and guidance. Offered spring semester and in summer school.

BCE 523 Program Development and Management. Three hours. 
An examination of the organization and implementation of the guidance functions of schools and the guidance responsibilities of counselors, teachers, and administrators. Offered spring semester.

BCE 525 Internship in School Counseling and Clinical Mental Health Counseling. Three to six hours.
Prerequisite: Permission of the faculty.
Supervised field experience in an appropriate job setting. Offered fall and spring semesters.

**BCE 528 Advanced Seminar in Clinical Mental Health Counseling.** Three hours.
Prerequisite: BCE 518 or equivalent course
Advanced study in clinical mental health counseling. Offered spring semester.

**BCE 533 Special Topics in Counselor Education.** One to three hours.
This course is designed to offer students a range of counseling-focused 500-level special topic classes.

**BCE 540 Introduction to Rehabilitation Counseling.** Three hours.
Philosophical, social, psychological, and legislative bases of rehabilitation; the nature and scope of the rehabilitation process and the functions of the rehabilitation counselor; and study of the individual. Offered fall semester.

**BCE 541 Principles and Practices of Rehabilitation Counseling.** Three hours.
Prerequisite for non majors: Permission of the instructor.
Supervised experiences in selected rehabilitation and agency settings to provide an opportunity to integrate theory and practice early and to do selected independent field studies. Offered fall semester.

**BCE 542 Medical, Functional, and Environmental Aspects of Disability I.** Three hours.
Orientation to the medical profession and related rehabilitation professions. Survey of body systems, their functions and malfunctions, and the most common diagnostic and treatment procedures. Implications for educational, social, and vocational development. Offered fall semester.

**BCE 543 Psychological and Sociological Aspects of Disability.** Three hours.
Psychological and sociological attitudes, adjustment problems, sexuality, rehabilitation techniques, placement, family and social systems implications, programs, and facilities; emphasis on severely disabled individuals. Offered spring semester.

**BCE 545 Seminar in Rehabilitation Counseling.** Three hours.
Helps integrate prior course and field experiences and serves as a forum to cover evolving legislation, practices, and consumer populations. Offered fall semester.

**BCE 546 Practicum in Rehabilitation Counseling.** Three to six hours.
Prerequisite: Permission of the faculty.
Supervised practice in rehabilitation counseling. Offered fall, spring, and summer semesters/terms.

**BCE 547 Internship in Rehabilitation Counseling.** Three to twelve hours.
Prerequisite: Permission of the faculty.
Supervised field experience in a rehabilitation setting. Offered fall, spring, and summer semesters/terms.

**BCE 548 Medical, Functional, and Environmental Aspects of Disability II.** Three hours.
A study of medical, psychosocial, and rehabilitation considerations surrounding cognitive disabilities arising from brain trauma, mental illness, and addictions. Offered spring semester.

**BCE 611 Multicultural Approaches to Counseling.** Three hours.
Prerequisites: Majors only or with instructor permission.
This course is designed to introduce students to multicultural issues unique to counseling and other helping professions. Offered even-numbered fall semesters.

**BCE 615 Field Experiences in Counselor Education.** Three hours.
Prerequisite: BCE 512, admission to specialist/doctoral study, and/or permission of the faculty; for majors only.
Supervised field experiences in counseling to supplement accredited, advanced-level internships. Offered annually.
**BCE 616 Internship in Counseling.** Three to nine hours.  
Prerequisites: Six hours from BCE 515, BCE 516, or BCE 546, and permission of the faculty.  
Supervised practice in counseling for advanced majors. Offered alternate spring semester.

**BCE 617 Internship in Group Counseling and Guidance.** Three hours.  
Prerequisites: BCE 521 and permission of the faculty.  
Supervised practice in group guidance techniques with clients in a variety of settings. Offered alternate fall semesters.

**BCE 618 Advanced Theories of Counseling.** Three hours.  
Historical and current approaches to individual counseling, and the theories of personality structure and individual behavior from which these approaches are derived. Offered alternate spring semesters.

**BCE 619 Internship in Supervision of Counseling.** Three to six hours.  
Prerequisite: Permission of the faculty.  
Supervision of practicum students within a structured pedagogical course. Offered in the fall and spring semesters.

**BCE 620 Counseling and Sexuality.** Three hours.  
A course that identifies sexual issues and dysfunctions and examines counseling strategies, treatment planning, and interventions. Offered even-numbered fall semesters.

**BCE 625 Advanced Internship in Counselor Education.** Six to twelve hours.  
Prerequisite: Permission of the faculty.  
Supervised field experiences in counseling and counselor education for advanced students. Offered fall and spring semesters.

**BCE 626 Readings in Counseling.** Three hours.  
Prerequisite: Permission of the faculty.  
Independent study under faculty direction. Offered fall, spring, and summer semesters/terms.

**BCE 631 Consultation, Administration, and Leadership in Counseling.** Three hours.  
Prerequisite: Advanced graduate student status or instructor’s permission. For majors only.  
An examination of consultation, collaboration, advocacy, administration, and leadership practices for counselors in a variety of practice settings.

**BCE 633 Advanced Seminar in Counselor Education.** Three hours.  
Prerequisite: Permission of the faculty.  
Seminars focusing on contemporary counseling issues and topics. Varied offerings.

**BCE 650 Counseling Strategies for Family Relationships.** Three hours.  
Prerequisite: BCE 512 or permission of the instructor.  
Examination of theoretical and applied elements of systemic intervention with troubled families. Offered spring semester.

**BCE 651 Counseling Strategies for Couple Relationships.** Three hours.  
Prerequisite: BCE 512 or permission of the instructor. Examination of theoretical and applied elements of intervention with distressed couples. Offered fall semester.

**BCE 652 Counseling Strategies for Adult-Child Relationships.** Three hours.  
Prerequisite: BCE 512 or permission of the instructor. Examination of theoretical and applied elements of intervention with discordant relationships between adults and children. Offered summer terms only.

**BCE 653 Introduction to Play Therapy.** Three hours.  
Prerequisite: BCE 512 or permission of the instructor.  
Lecture/laboratory experience focusing on an overview of play therapy, including history, theories, beginning skills, and practicum experience. Variable offerings.
BCE 654 Advanced Play Therapy. Three hours.  
Prerequisite: BCE 512, BCE 653, or permission of the instructor.  
Individual readings, conferences, group discussions, lecture and reports focusing on techniques/methods, applications to special settings or populations, ethics, and professional responsibilities with an extended practicum experience.

BCE 698 Nondissertation Research. Three to six hours.  
Directed research not related to dissertation research. Variable offerings.


Course Descriptions (BEP)

BEP 500 Advanced Educational Psychology. Three hours.  
Prerequisite: Graduate standing.  
Principles of educational psychology for teaching and for educational services in schools and colleges.

BEP 505 Development of Self-Regulation. Three hours.  
Investigates the development of self-regulatory processes and the match between those processes and educational practice. Transitions from home to school, elementary to secondary, and high school to college/work are considered in depth.

BEP 541 Authentic School Learning and Teaching. Three hours.  
Prerequisite: Admission to the Graduate School.  
Cognitive approaches to learning/teaching with focus on what constitutes authentic learning and on role of the intuitive knowledge base. Topics/themes include nature of preschool learning, sources contributing to learning, constructivism, and holistic perspectives.

BEP 550 Life-Span Development. Three hours.  
Prerequisite: Admission to the Graduate School.  
A study of principles and concepts of physical, cognitive, personality, and social development from conception through death.

BEP 561 Social and Cultural Basis of Behavior. Three hours.  
Prerequisite: Admission to the Graduate School.  
Provides fundamental knowledge regarding the methods in which social and cultural interactions and histories influence human behavior. Focuses on application of social psychology principles and multicultural issues to increase awareness and improve skills across a variety of social settings, including schools and human-service agencies.

BEP 565 Personality and Social Development. Three hours.  
Prerequisite: Admission to the Graduate School.  
Examines the major theories of personality and social-emotional factors as they impact on the learning process and educational practice.

BEP 598 Nonthesis Research. Variable credit.  
Prerequisite: Permission of the instructor.

BEP 599 Thesis Research. Variable credit.

BEP 600 Contemporary Educational Problems and Educational Psychology. Three hours.  
Thorough exploration of current problem areas in education and the impact and perspectives of educational psychology.

BEP 601 Family, School, Comm Relations. Three hours.  
Provide candidates with a strong foundation for understanding family, school, and community partnerships, and to build their abilities to put this knowledge into practice within their own school settings.
**BEP 641 Authentic School Learning and Teaching.** Three hours. Cognitive approaches to learning/teaching with focus on what constitutes authentic learning. Topics/themes include nature of preschool learning, sources contributing to learning, constructivism, and holistic perspectives.

**BEP 650 Psychology of Morality.** Three hours. Prerequisite: Graduate status and a background in Educational Psychology, Psychology, or Human Development. An overview of the psychology of morality with a particular focus on the processes leading to moral action. Specialty topics include measurement, gender, cross-cultural, and educational issues. Character education will be discussed with special attention to the empirical and theoretical background of current character education programs.

**BEP 655 Adolescent Psychology.** Three hours. Theories and research on adolescent psychology. Examination of physical, cognitive, and personality/social development within the context of the family, schools, and peer relations.

**BEP 661 Psychological Study of Learners.** Three hours. Thorough study of intervention, remediation, and training strategies in cases of educational and learning problems. Focus on individual differences in cognitive processing, biological factors, cognitive style, intelligence, self-regulation, motivation, and psychological processes of reading, writing, math, and science.

**BEP 665 Motivation and Emotion in Education.** Three hours. Exploration into processes of human motivation and emotion with a focus on educational settings.

**BEP 672 Teaching Educational Psychology in College.** Three to twelve hours. Prerequisite: Permission of the instructor. Seminar for graduate student instructors. Students must be GTAs in educational/school psychology. Designed to help GTAs use reflective decision making and knowledge of educational psychology to teach undergraduates.

**BEP 673 Doctoral Research and Ethics Seminar.** One to six hours. Prerequisite: Permission of the instructor. Critical study of current issues in educational psychology.

**BEP 690 Readings in Educational Psychology.** Three hours. Prerequisite: Permission of the instructor. An opportunity for the student to study intensively a topic in educational psychology, covering a sizable body of literature (the topic chosen should nevertheless be narrower than that subsumed under the name of a course).

**BEP 698 Nondissertation Research.** Variable credit. Prerequisite: Permission of the instructor. Participation in a research project relating to educational psychology.

**BEP 699 Dissertation Research.** Variable credit. Three-hour minimum.

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**Course Descriptions (BER)**

**BER 500 Introduction to Educational Research.** Three hours. An overview of research methodology, primarily for master’s students. Offered fall, spring, and summer semesters.

**BER 540 Statistical Methods in Education.** Three hours. This three-hour course covers basic descriptive and inferential statistics, including measures of central tendency and dispersion. Hypothesis testing related to one-sample z-and t-test; independent and dependent samples t-test; correlation; and chi-square and simple regression are included. An introduction SPSS is required. Offered fall, spring, and summer semesters.
BER 545 Analysis of Variance in Education. Three hours.
Prerequisite: BER 540 or equivalent.
This is a three-hour course in which the student will learn various forms of the General Linear Model (GLM) using Analysis of Variance (ANOVA) methods. One and Two-Way ANOVAs; including contrast and interaction analyses, analysis of covariance ANCOVA; Repeated Measures; and Mixed-Model design; non-parametric. SPSS is required.

BER 546 Regression Methods in Education. Three hours.
Prerequisite: BER 540 or equivalent.
Topics include correlation, simple, and multiple regression analyses from two to multiple variables. SPSS is required.

BER 550 Evaluation of Classroom Learning. Three hours.
A comprehensive contemporary approach to the development, application, and interpretation of teacher-made classroom assessments; use of text book assessments to be aligned with national and state achievement standards. Attention is given to interpreting standardized norm and criterion referenced tests. Grading practices are presented especially to be aligned with No Child Left Behind Federal legislation 2001. Offered fall semester.

BER 558 Introduction to Psychometrics. Three hours.
Prerequisite: BER 540 or equivalent.
An introduction to classical and current theories and practices in psychometrics. Theory is presented together with exposure to many of the popular assessment procedures. Offered fall semester.

BER 600 Quantitative Research Methods in Education. Three hours.
An overview of research methods and procedures in education, primarily for doctoral students. Emphasis is given to the quantitative and qualitative methods used in writing a doctoral dissertation.

BER 603 Survey Research in Education. Three hours.
Prerequisite: BER 540.
Comprehensive introduction to using survey instruments for research purposes. Survey development, construction, validation scaling, sampling, and research methods as they apply to matching the survey to research questions are covered.

BER 630 Case Study Research Methods. Three hours.
Prerequisite: BER 631.
Examines the production of case studies of individual practices, discrete institutions and organizations, and state-level policies. Explores the research methods that can inform the production of case study representations of human experience, as well as the different styles of case study writing. Offered summer term.

BER 631 Inquiry as Interpretation: Qualitative I. Three hours.
Examines the history and philosophy of naturalistic studies of human experience. Concentrates on post-positivistic, phenomenological, structuralist, and post-structuralist theory and modes of analysis. Course assignments provide practice with rudimentary qualitative research skills. Offered fall, spring, and summer semesters.

BER 632 Reflexiveness and Resistance in Research Representation: Qualitative II. Three hours.
Prerequisite: BER 631.
Examines the irony and ideology of naturalistic studies of human experience. Examines the epistemic limits of any method of research representation, and the political and ethical implications of those limits for researchers. Course assignments provide practice with intermediate qualitative research skills, including participant observation, field note development, and interviewing skills. Offered spring and summer semesters.

BER 633 Ethics and Aesthetics of Meaning Making: Qualitative III. Three hours.
Prerequisites: BER 631 and BER 632.
Examines the ethics, aesthetics, and opportunities for advocacy in naturalistic studies of human experience. Explores feminist, Afrocentric, critical theoretic, artistic, and journalistic conceptions of data collection and a variety of styles and formulas for research writing. Course assignments support the development of students’ research interests and are geared toward scholarly publication. Offered all semesters.

**BER 640 Multivariate Dependence Methods.** Three hours. Prerequisites: BER 540, BER 545, and BER 546. Covers the following statistical procedures: discriminant analysis, Hotelling's T2, multivariate analysis of variance (MANCOVA), Multivariate covariance (MANCOA), multivariate regression, and other dependence methods.

**BER 641 Multivariate for Interdependence Methods.** Three hours. Prerequisites: BER 540, BER 545, and BER 546. Covers the following statistical procedures: principal component analysis, factor analysis, cluster analysis, multidimensional scaling, discriminate analysis, canonical correlation, and hierarchical linear modeling (HLM) and other interdependent multivariate methods.

**BER 642 Advanced Regression Methods.** Three hours. Prerequisite: BER 640. Different multiple regression methods are presented, including an overview of ordinary least squares regression, ordinal regression, logistic and probit regression, loglinear, mixed, and regression discontinuity. Interpretation of results diagnostics and applications are covered for the several glm models.

**BER 646 Structural Equation Modeling.** Three hours. Prerequisites: BER 540, BER 545, and BER 546. Includes an introduction to the basic concepts of structural equation modeling, including approaches to regression, path analysis, confirmatory factor analysis, and model building with dependent and independent variables. Offered spring.

**BER 647 Statistical Theory & Simulation.** Three hours. Prerequisite: BER 540. Statistical theory and simulation of statistical distributions. Topics include factors affecting sampling distributions, sampling from different distributions, Chebyshev's theorem, Central Limit Theorem, probability distributions, statistical distributions (normal, t, chi-square, correlation, regression). Poser (sample size, Type I error, Type II error, confidence interval, effect size), Monte Carlo, meta analysis, bootstrap, and jackknife techniques. Offered summer session.

**BER 658 Psychometric Theory and Practice.** Three hours. Prerequisite: BER 540, BER 558. Major topics include true score reliability, validity, classical theory, generalizability theory, contemporary theory: item response theory. Computer applications required. Offered spring of odd years.

**BER 660 Evaluation I: Evaluation Theory and Practice.** Three hours. Prerequisite: Graduate standing. Concepts and techniques for evaluating education programs, projects, materials, curriculum, and personnel. Field work and computer analyses required. Offered fall semester.

**BER 665 Mixed Methods Research Design.** Three hours. Prerequisites: BER 540 and BER 631. Course participants will be provided with an overview of the history and foundations of mixed methods research, literature on emerging trends in mixed methods research, types of MM designs, types of research problems addressed by MM research, data collection and analysis strategies, and reporting and evaluating mixed methods research.

**BER 672 Teaching Educational Research in College.** Three hours. Prerequisite: Permission of the instructor. Seminar for graduate teaching assistants. Offered each semester.
BER 673 Seminar in Educational Research. Three hours.
Prerequisite: Permission of the instructor.
A course designed to help majors in educational research prepare for the profession.

BER 687 Fieldwork in Educational Research. Three to six hours.
Prerequisite: Approval of advisor.
Faculty-supervised participation in research and other educational projects. Work is related to advisor’s research interests. Field work required. Offered fall, spring and summer semesters.

BER 689 Practicum in Educational Research. Three to six hours.
Prerequisite: Approval of advisor. Practicum is a student-initiated research project done with faculty supervision. Field work is required. Offered fall, spring and summer semesters.

BER 690 Readings in Educational Research. Three hours.
Offered fall and spring semesters and in summer school.

BER 695 Special Topics in Educational Research. Three hours.
Special topics will be focused on selected current advanced statistical and/or research methods in Educational Research. Examples of special topics include courses such as: HLM (hierarchical linear modeling) or qualitative methods like digital storytelling. Offered intermittently.

BER 698 Nondissertation Research. Variable credit.


Course Descriptions (BSP)

BSP 500 Introduction to School Psychology. Three hours.
Prerequisite: Graduate standing.
The history, role, and ethical and legal issues of school psychology are studied. The school psychologist's role in team decision making is emphasized.

BSP 515 Cognitive and Academic Assessment and Data-Based Decision Making. Three hours.
Prerequisite: Graduate standing and permission of the instructor.
Cognitive and academic assessment and psychological case report writing, focusing on standardized measures, as well as authentic and direct techniques, and treating the topics from perspectives in data based decision making and intervention for children with learning and behavior problems.

BSP 516 Social-Behavioral Assessment and Data-Based Decision Making. Three hours.
Prerequisite: Graduate standing and permission of the instructor.
Study of behavioral and social-emotional assessment, emphasizing data-based decision making for children with learning and behavioral problems; using data in meaningful educational and psychological interventions is also stressed.

BSP 586 Assessment Practicum in School Psychology. Three hours.
Prerequisite: Permission of the instructor.
Requires 150 hours of supervised experience in assessment and is conducted in public schools or other agencies. Intellectual, achievement, behavioral, and social-emotional assessment of children with learning and behavioral problems and use of assessment in team decision making are emphasized.

BSP 588 Internship in School Psychometry. Three to six hours.
Prerequisite: Permission of the instructor.
The student performs the duties of a school psychometrist in a school system, under supervision.
BSP 601 Applied Pediatric Neuropsychology. Three hours.
Study of applied brain-behavior relationship in the areas of academics, behavior, and social/emotional skills. Various disorders, assessment techniques, interventions, and preventions will be examined and discussed.

BSP 625 Cognitive and Behavioral Interventions. Three hours.
Study of applied behavioral analysis, cognitive behavior modification, motivation techniques, aptitude-treatment interaction, social problem-solving training, study-skills training, peer-influenced academic interventions, prevention, and other interventions.

BSP 635 Consultation in Educational and Agency Settings. Three hours.
Study of consultation with teachers, administrators, parents, and various community agencies, emphasizing behavioral, ecological, mental health, and organized models and appropriate interventions to be planned with consultees.

BSP 660 Psychopathology. Three hours.
Thorough examination of the history, scope, and understanding of abnormal behavior through the life span, with emphasis on educational and clinical implications. The most recent classification system is used to structure topics and issues in the course.

BSP 673 Doctoral Research and Ethics Seminar. Three hours.
Prerequisite: Permission of the instructor.
Covers topics of current interest to school psychologists.

BSP 686 Consultation and Intervention Practicum in School Psychology. Three hours.
Prerequisite: Permission of the instructor.
Requires 150 hours of supervised experience in conducting consultation and intervention (within a team-decision-making framework) with children, parents, teachers, and administrators in public schools and other agencies.

BSP 687 Specialist Internship in School Psychology. Three to six hours.
Prerequisite: Permission of the instructor.
The student performs the activities of a school psychologist in an educational or other agency, under supervision.

BSP 688 Doctoral Internship in School Psychology. Three to six hours.
Prerequisite: Permission of the instructor.
The student performs the duties of a school psychologist in an educational agency, under supervision.

BSP 689 Research Practicum in School Psychology. Three to six hours.
Prerequisite: Permission of the instructor.
Participation in cooperative faculty/student research on some aspect of school psychology.

BSP 690 Readings in School Psychology. Three hours.
Prerequisite: Permission of the instructor.
An opportunity for the student to study intensively a topic in school psychology, covering a sizable body of literature (the topic chosen should nevertheless be narrower than that subsumed under the name of a course).

BSP 698 Nondissertation Research. Three hours.
Prerequisite: Permission of the instructor.
Participation in a research project relating to school psychology.

The Department of Curriculum and Instruction consists of the following:

10.8.1 Elementary Education Program
10.8.2 Programs in Secondary Curriculum, Teaching, and Learning

10.8.1 ELEMENTARY EDUCATION PROGRAM (CEE)
Program Coordinator: Associate Professor Diane Carver Sekeres, Office: 208-B Graves Hall

Admission Requirements
Admission requirements for the Graduate School (Admission Criteria) and the College of Education (General Admission) are detailed in earlier sections of this catalog.

MA Degree Requirements
Admission requires appropriate prior certification. A minimum of 30 hrs of course credit must be earned, and a comprehensive exam must be successfully completed. Course of study includes curriculum and instruction, 6 hrs; foundations of professional studies, 3 hrs; educational research, 3 hrs; teaching field, 12 hrs; electives (which may be specified), 6 hrs. If the special education requirement has not been fulfilled, the student may be required to complete an additional 3-hour survey course in special education. If the evaluation of classroom learning requirement has not been fulfilled, the student may be required to complete an additional 3-hour course. Courses that fulfill these requirements are listed here: (http://education.ua.edu/departments/ci/elementary-education/master-of-arts) or a list may be obtained from the program secretary in 204 Graves Hall. Students may not count more than 6 hrs in certain seminar/workshop/problems courses toward the completion of the degree. A maximum of 12 hours of transfer credit, if approved by the student’s advisor, may be applied toward the degree. Students should see their advisors regarding which courses are appropriate for transfer credit.

Nontraditional, Alternative Initial Teacher Certification Program
A minimum of 36 semester hours of specific graduate credit plus some undergraduate prerequisites are required for the certificate. The program of study must be planned with an advisor. Also, see the Elementary Education Program webpage.

EdS Degree Requirements
Admission requires appropriate prior certification. A minimum of 30 hrs of appropriate work beyond the MA degree and the completion of a comprehensive exam are required for the educational specialist degree. The course of study includes: foundations of professional studies, 3 hrs; educational research, 3 hrs; teaching field courses, 12 hrs; action research, 6 hrs; electives (which may be specified), 6 hrs. Courses that fulfill these requirements are listed here: (http://education.ua.edu/departments/ci/elementary-education/eds), or a list may be obtained from the departmental secretary in 204 Graves Hall. A maximum of 6 hrs of approved transfer credit (maximum of 9 hrs from UAB/UAH) may be applied toward the degree.

Class AA Certification Required Courses
A minimum of 30 hrs of appropriate work beyond the MA degree is required for the Class AA certificate (see EdS above). Students who are pursuing certification options must be certain that their planned programs meet all certification requirements according to programs approved by the Alabama State Department of Education. Approved program checklists are available from the program office. Courses used to qualify for a lower-level supporting certificate may not be used again in a higher-level certification program.

Additional Degree Requirements by the Graduate School and the College of Education (Master’s, Professional Certification, and EdS) are detailed in earlier sections of this catalog.

http://graduate.ua.edu/catalog/22800.html
Course Descriptions (Note: see also CIE and CRD courses)

CEE 515 Teaching Elementary School Science (N–6). Three hours. Designed to expand knowledge and competencies of elementary teachers of science with specific focus on current standards, research, and inquiry models of instruction.

CEE 516 Social Sciences in the Elementary School. Three hours. The focus is on current trends in elementary social studies, with particular attention to innovative instructional modes and to relating learning to the learners' social environment.

CEE 517 The Language Arts Program in Elementary Schools. Three hours. Designed to extend and strengthen the knowledge and competencies of experienced teachers of communication arts and skills in the elementary school.

CEE 525 Issues Trends in Elementary School Science. Three hours. Focus on current research and trends in elementary science with respect to historical, political, and socio-cultural contexts.

CEE 526 Implementing Social Studies. Three hours. The focus is on considering and applying the research base of investigating social studies curricula and instruction to one's own classroom.

CEE 530 Modern Elementary School Programs. Three hours. This course is an exploration of evolving elementary and secondary schools and their programs, with an emphasis upon an analysis of current trends, issues, and problems which impact directly upon modern school practices.

CEE 532 The Elementary School Curriculum. Three hours. The evolving elementary school curriculum, from historical, current trends, and projective perspectives.

CEE 550 Introduction to Teaching Elementary School Science. Three hours. Prerequisite: Admission to Elementary Education Alternative Certification program. Introduction to the teaching of science. Current research is emphasized supporting best instructional practices in science. Intensive field experience is required.

CEE 560 Introduction to Teaching Social Studies. Three hours. Prerequisite: Admission to Elementary Education Alternative Certification program. Teaching elementary social studies using research-based instructional strategies and curriculum. Intensive field experience is required.

CEE 565 Classics and Modern Literature for Children. Three hours. Deals with major developments in literature for children; the areas of children's literature; and effective methods of helping children enjoy and use literature.

CEE 570 Teaching Reading in the Elementary School. Three hours. Prerequisite: Admission to Elementary Education Alternative Certification program. A foundation for the teaching of reading in the elementary grades (K-6) with an emphasis on development, assessment, and instruction for individual students. Intensive field experience is required.

CEE 574 Guiding Pupil Learning. Three hours. Focuses on understanding how children learn, what factors influence learning, and how teachers can facilitate learning using brain based learning. Application of these principles of learning to classroom situations.

CEE 578 Teaching Language Arts in the Elementary School. Three hours. Prerequisite: Admission to Elementary Education Alternative Certification program. Deepening understanding of teaching reading/language arts with emphasis on planning a
balanced literacy program. Intensive field experience is required.

**CEE 580 Concepts of Elementary School Mathematics.** Three hours.
Focuses on the current research in mathematics education concerning how children learn mathematics.

**CEE 581 Mathematics Curriculum Design.** Three hours.
Designing mathematics curricula using current research from mathematics education.

**CEE 582 Teaching Mathematics for Elementary Alternative Students.** Three hours.
Prerequisites: Admission to Elementary Education Alternative Certification program.
This course prepares students to effectively teach mathematics in grades K–6. Emphasis is on the current research in mathematics education. Intensive field experience is required.

**CEE 592 Fieldwork in Elementary Education.** One to three hours.
Prerequisite: Permission of the instructor.
Field-based opportunities to study or work on topics or projects of individual or collective concern. Topics vary.

**CEE 594 Problems in Elementary Education.** One to three hours.
Prerequisite: Permission of the instructor.
Opportunities to study or work independently on topics or projects of individual concern. Credit is based on the nature and degree of student involvement.

**CEE 595 Practicum in Elementary Education.** Variable credit.
Prerequisite: Admission to the teacher education program.
Corequisites: CEE 570, CEE 582
Supervised opportunities to apply knowledge and skills in a professional setting. Credit is based on the nature and degree of student involvement.

**CEE 596 Advanced Practicum.** Three hours.
Prerequisite: Admission to the teacher education program.
Corequisites: [CEE 550, CEE 560, CEE 578]
A field-based course providing graduate students with opportunities to practice authentic classroom application of various content areas in elementary education.

**CEE 597 Internship in Elementary Education.** Six to nine hours
Prerequisites: Admission to the teacher education program, a minimum GPA of 2.75 for all work attempted, and a minimum of 2.75 in the major.
Observation, participation, and teaching experiences supervised by selected cooperating teachers in public elementary schools. Additional supervision is provided by College of Education personnel.

**CEE 598 Nonthesis Research.** Variable credit.

**CEE 616 Advanced Social Studies in the Elementary Classroom.** Three hours.
The focus is on current trends and research in elementary social studies with particular attention to innovative instructional modes and relating learning to the learner's social environment.

**CEE 644 Advanced Study of Current Trends and Research in Early Childhood Education.** Three hours. Prerequisite: Permission of the instructor.
Analysis of current research findings, program development, and the resulting trends in early childhood education.

**CEE 687 Topical Research Review.** Three hours.
Supervised opportunities to apply knowledge and skills in a professional setting. Credit is based on the nature and degree of student involvement.

**CEE 690 Advanced Seminar in Elementary Education.** One to three hours.
Prerequisite: Permission of the instructor.
In-class opportunities to analyze and discuss current topics, problems, and/or projects of collective concern. Topics vary.

**CEE 692 Advanced Fieldwork in Elementary Education.** One to three hours. Prerequisite: Permission of the instructor. Field-based opportunities to study or work on topics or projects of individual or collective concern. Topics vary.

**CEE 694 Advanced Problems in Elementary Education.** One to six hours. Prerequisite: Permission of the instructor. Opportunities to study or work independently on topics or projects of individual concern. Credit is based on the nature and degree of student involvement.

**CEE 695 Practicum in Elementary Education.** Variable credit. Supervised opportunities to apply knowledge and skills in a professional setting. Credit is based on the nature and degree of student involvement.

**CEE 697 Educational Specialist Degree Research.** Variable credit.

**CEE 698 Nonthesis Research.** Variable credit.

**CEE 699 Dissertation Research.** Variable credit. Three-hour minimum.
THE UNIVERSITY OF ALABAMA GRADUATE CATALOG

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10.8 DEPARTMENT OF CURRICULUM and INSTRUCTION
Interim Department Head: Professor Vivian H. Wright, Office: 201C Graves Hall

The Department of Curriculum and Instruction consists of the following:

10.8.1 Elementary Education Program
10.8.2 Programs in Secondary Curriculum, Teaching, and Learning

10.8.2 Programs in Secondary Curriculum, Teaching, and Learning (CSE, CIE, CRD)
Program Coordinator: Associate Professor Karen Spector, Office: 212A Graves Hall

The Department of Curriculum and Instruction consists of programs in Secondary Curriculum, Teaching, and Learning, the Elementary Education Program, and Programs in Literacy Education.

Admission Requirements
Admission requirements for the Graduate School (Admission Criteria) and the College of Education (General Admission) are detailed in earlier sections of this catalog.

MA Degree Requirements
A minimum of 30 hours of course credit must be earned; see specific program checklists. The program of study must be planned with an advisor.

Nontraditional, Alternative Initial Teacher Certification Program
A minimum of 42 semester hours of specific graduate credit plus some undergraduate prerequisites are required for the certificate. The program of study must be planned with an advisor.

EdS Degree Requirements
A minimum of 30 hours of appropriate work beyond the MA degree and the completion of a research project are required for the educational specialist degree. Graduate coursework must include the following: curriculum and teaching, 9 hours; foundations of professional studies, 3 hours; evaluation of teaching and learning, 3 hours; teaching field, 12 hours; electives (which may be specified), 6 hours. If the special education requirement has not been fulfilled, the student may be required to complete an additional 3-hour survey course in special education.

Postsecondary Instruction
Graduate students in both the MA and EdS programs who have an interest in teaching in postsecondary institutions may take advantage of the program's flexibility to acquire a maximum of 18 hours in cognate field courses. Students who have this option in mind should coordinate the program of study carefully with their advisors.

Class AA Certificate Required Courses
A minimum of 30 hours of appropriate work beyond the MA degree is required for the Class AA certificate. Students who are pursuing certification options must be certain that their planned programs meet all certification requirements according to programs approved by the state department of education. Approved program check lists are available from the program office.

Students who earned initial credit toward Class AA professional certification during the fall of 1992 or later must enroll in and complete the EdS degree program. Courses used to qualify for a lower-level supporting certificate may not be used again in a higher-level certification program.

See the Graduate School (Degree Requirements) and the College of Education (Master's, Professional Certification, and EdS) degree requirements detailed in earlier sections of this catalog for all degrees.

http://graduate.ua.edu/catalog/22850.html
PROGRAMS IN SECONDARY CURRICULUM, TEACHING, AND LEARNING COURSES

Course Descriptions (CSE) (See also CIE and CRD courses listed below)

CSE 530 The Modern Secondary School Program. Three hours.
The evolving secondary school and its program, with emphasis on analysis of current trends that directly affect modern school practices in a societal context.

CSE 531 Teaching of Family and Consumer Sciences. Three hours.
Prerequisite: Enrollment in nontraditional, alternative certification program.
Implementation of competency-based professional education in home economics at the preprofessional level. Competencies are developed in the following categories: philosophy, professional role, program planning and execution, educative process, and research.

CSE 532 The Secondary School Curriculum. Three hours.
The evolving secondary school curriculum, from historical, current trends, and projective perspectives.

CSE 555 Adolescent Literature. Three hours.
An introduction to literature appropriate for the adolescent reader; reading patterns and major concerns of adolescents.

CSE 562 Improving Family and Consumer Sciences Instruction. Three hours.
Identification and development of teaching-learning strategies and resources within the context of professional development education in home economics.

CSE 563 Improving English Instruction. Three hours.
Prerequisite: CSE 479 or equivalent.
Principles of learning applied to concepts, skills, attitudes, and problem solving in English and speech; diagnosis, enrichment, remedial teaching, and evaluation.

CSE 564 Improving Social Science Instruction. Three hours.
Prerequisite: CSE 487 or equivalent.
Exploration and examination of methods and materials for improving social studies instruction. Focuses on teaching for diverse learners, constructivist methods, critical thinking, interdisciplinary teaching, and various technologies as they apply to secondary social studies classrooms.

CSE 565 Improving Science Instruction. Three hours.
Prerequisite: CSE 486 or equivalent.
Principles of learning applied to concepts, skills, attitudes, and problem solving in science; diagnosis, enrichment, remedial teaching, and classroom evaluation, and application and evaluation of technologies.

CSE 566 Improving Mathematics Instruction. Three hours.
Prerequisite: CSE 483 or equivalent.
Principles of learning applied to concepts, skills, attitudes, and problem solving; proper use and evaluation of teaching aids; construction and utilization of teaching instruments; and examination and exploration of alternative assessment strategies and technologies for use in secondary mathematics classrooms.

CSE 569 Pedagogical Grammar. Three hours.
Exploration of structural, transformational, and traditional approaches to teaching grammar.

CSE 570 Teaching Writing 6-12. Three hours.
This course is designed to prepare prospective and current English teachers to successfully teach and evaluate writing in grades 6-12.
Prerequisite: Admission to TEP or graduate program

http://graduate.ua.edu/catalog/22850.html
CSE 574 Guiding Pupil Learning. Three hours.
Understanding ways children and youth learn, factors influencing learning, and ways in which teachers can facilitate learning through brain based research. Application of principles of learning to classroom situations. Usually offered during summer school.

CSE 575 Developing Mathematics Teaching with New Technology. Three hours.
Focuses on the development of teaching secondary mathematics with new and emerging technologies. Explores the appropriate use of technologies to enhance conceptual understanding and problem solving in mathematics. Development of advanced classroom lessons and assessments in a technology classroom.

CSE 576 Improving Science Teaching through New Technologies. Three hours.
Examination and evaluation of appropriate technologies for the secondary science curriculum.

CSE 579 Teaching Secondary School English. Three hours.
Prerequisite: Admission to Teacher Education Program.
Corequisite: CRD 512 and CSE 592.
Methods and media essential to effective instruction in English in the secondary school.

CSE 580 Teaching Secondary School Foreign Languages. Three hours.
Prerequisite: Admission to Teacher Education Program.
Corequisite: CRD 512 and CSE 592.
Theories, methods, techniques, and essential media for teaching foreign languages effectively in the secondary school.

CSE 583 Teaching Secondary School Mathematics. Three hours.
Prerequisite: Admission to Teacher Education Program.
Corequisite: CRD 512 and CSE 592.
Methods, media, and techniques of teaching mathematics in the secondary school, including selected topics in mathematics and exploration and examination of various technologies for use in secondary mathematics classrooms, including, but not limited to, calculators and various computer software.

Prerequisite: Admission to Teacher Education Program.
Corequisite: CRD 512 and CSE 592.
Methods and technologies essential to effective instruction in science in the secondary school.

CSE 587 Teaching Secondary School Social Science. Three hours.
Prerequisite: Admission to Teacher Education Program.
Corequisite: CRD 512 and CSE 592.
Theories and methods of teaching social studies in secondary schools, including examination and exploration of instructional materials, various technologies, constructivist methods, and assessments.

CSE 592 Fieldwork in Secondary Education. Three hours.
Prerequisite: Admission to the teacher education program.
Corequisite: Appropriate content methods course. A clinical experience taken concurrently with the methods course and designed to facilitate students' development of pedagogical skills, effective thinking, and professional problem solving.

CSE 593 Workshop in Secondary Education. One to three hours.
Prerequisite: Permission of the instructor. In-class opportunities to study or work on topics or projects of collective concern. Topics vary. May be repeated.

CSE 594 Problems in Secondary Education. One to six hours.
Prerequisites: Permission of the instructor and approval of the program chair in secondary education. Opportunities to study or work independently on topics or projects of individual concern. Credit is based on the nature and degree of student involvement.

CSE 595 Practicum. Three hours.
Focuses on analysis and performance of teaching strategies and the evaluation of teaching-learning problems.

CSE 597 Internship in Secondary Education. Six to nine hours. Prerequisites: A minimum GPA of 2.75 in graduate teaching field and a minimum GPA of 2.75 in professional courses; a minimum GPA of 2.75 on all work attempted (undergraduate and graduate); an overall graduate GPA of 3.0; and satisfactory completion of 12 hours in the graduate teaching field courses. Full-time internship as a teacher in the major teaching field.

CSE 598 Nonthesis Research. Variable credit.

CSE 652 Investigating Opportunity to Learn in Secondary English. Three hours. Students will explore and investigate opportunity to learn (OTL) in secondary English classes. Methods for describing, analyzing, and interpreting OTL in secondary English classes will be identified. The course also focuses on the effects of differing levels of OTL on literacy achievement.

CSE 663 Secondary School English. Three hours. Literature, research, and content in English and speech; current trends; experimental programs; gradation or sequence of subject matter; criteria for program evaluation; and basic issues.

CSE 664 Secondary School Social Science. Three hours. Prerequisite: CSE 564 or equivalent. Focuses on curriculum and research in social studies education, including materials development and current issues in the field.

CSE 665 Secondary School Science. Three hours. Prerequisite: CSE 565 or equivalent. Literature, research, and content in science; current trends; experimental programs; gradation of subject matter; criteria for program evaluation; and basic issues.

CSE 666 Improving Mathematics Instruction. Three hours. Prerequisite: CSE 566 or equivalent. Principles of learning applied to concepts, skills, attitudes, and problem solving; proper use and evaluation of teaching aids; construction and utilization of teaching instruments; and examination and exploration of alternative assessment strategies and technologies for use in secondary mathematics classrooms.

CSE 667 Secondary School Foreign Language. Three hours. Prerequisite: CSE 567 or equivalent. Literature, research, and content in foreign languages; current trends; experimental programs; criteria for program evaluation; special problems; and graduation of subject matter.

CSE 670 Research and Theory in Secondary Education. Three hours. An examination of the relationship between theory and research. Students learn to search and evaluate the research literature and develop a proposal for research.

CSE 675 Improving Mathematics Teaching with New Technology. Three hours. Focuses on the implementation, refinement, and assessment of mathematics teaching using advanced and new technologies including advancing critical thinking and cognitive task levels of classroom mathematics instruction.

CSE 690 Advanced Seminar in Secondary Education. One to three hours. Prerequisites: Permission of the instructor and approval of the program chair in secondary education. In-class opportunities to analyze and discuss current topics, problems, and projects of collective concern. Topics vary.
**CSE 692 Advanced Fieldwork in Secondary Education.** One to three hours. 
Prerequisites: Permission of the instructor and approval of the program chair in secondary education.
Field-based opportunities to study and work on projects or topics of individual or collective concern. Topics vary.

**CSE 693 Advanced Workshop in Secondary Education.** One to three hours. 
Prerequisites: Permission of the instructor and approval of the program chair in secondary education.
In-class opportunities to study or work on topics or projects of collective concern. Topics vary. May be repeated.

**CSE 694 Advanced Problems in Secondary Education.** One to six hours. 
Prerequisites: Permission of the instructor and approval of the Department Head.
Opportunities to study or work independently on topics or projects of individual concern. Credit is based on the nature and degree of student involvement.

**CSE 695 Practicum in Secondary Education.** Variable credit. 
Prerequisite: Permission of the instructor. 
Supervised opportunities to apply knowledge and skills in a professional setting. Credit is based on the nature and degree of student involvement.

**CSE 697 Educational Specialist Degree Research.** Three hours. 
Systematic classroom inquiry is used to engage students in a teacher action research project. Advisor recommendation required.

**CSE 698 Nonthesis Research.** Variable credit.

**CSE 699 Dissertation Research.** Variable credit. Minimum of three hours' enrollment per semester.

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**CURRICULUM AND INSTRUCTION (CIE) COURSES**

The courses are designed to meet the continuing professional-growth needs of teaching personnel. In all programs, heavy emphasis is placed on the proper blend of theoretical and conceptual considerations with the realities of the classrooms in which graduates work. Doctoral degrees utilizing these courses are available in the traditional fields of elementary and secondary education, and these courses may be applicable in other departments. Doctoral minors and supporting concentrations have recently been developed from a generic perspective. The latter option was developed especially for doctoral students in educational research and evaluation who have not had previous school-based experience, although others may qualify.

**Course Descriptions (CIE)**
The following courses are designed to serve students in all programs.

**CIE 527 Teaching Literacy to Second Language Learners.** Three hours.
This course applies methods for teaching reading and writing to limited English proficient students K–12, assessment of literacy strategies and skills, and development of materials.

**CIE 562 TESL: Basic Methods.** Three hours. 
Prerequisite: Permission of the instructor. 
Theories, methods, and strategies for English as a second language that focus on communicative competence and cross-cultural understanding.

**CIE 567 Improving Foreign Language Instruction.** Three hours. 
Prerequisite: Permission of the instructor. 
Critical examination of theoretical perspectives, methods, major issues, and controversies pertinent to teaching foreign language; use of technology in language instruction is a critical
CIE 576 Linguistics for Classroom Teachers. Three hours. This linguistic course enables teachers to understand the basics of how the English language functions. Provides information essential for dealing with students whose native language is not English. Offers useful information about various English dialects as well.

CIE 577 Second Language Acquisition: Issues, Theories, and Instructional Implications. Three hours. Introduction to and analysis of the main issues and theories in second language acquisition (SLA); students deduce and demonstrate instructional implications.

CIE 578 Second Language Testing, Assessment, and Evaluation. Three hours. Prerequisite: Permission of the instructor. Preparation in the background and skills necessary to construct classroom-based tests, appropriately use published tests, and understand second or foreign language program evaluation.

CIE 579 Teaching English as a Second Language: Programs and Policies. Three hours. Prerequisite: Permission of the instructor. Theories of language learning, acquiring a second language, and current linguistic theories; emphasis is on programs, policies, and instructional methods of ESL education.

CIE 580 Teaching Foreign Languages. Three hours. Prerequisite: Permission of the instructor. Theories, methods, and strategies for foreign language teaching that focus on communicative competence and cross-cultural understanding; use of technology in language education is a critical component.

CIE 582 Devl Util Instr Mtrls. Three hours. Critical examination of theoretical perspectives, methods, major issues and controversies pertinent to teaching second languages, as well as the use of technology as a critical component.

CIE 592 Fieldwork in Curriculum and Instruction. Three hours. Prerequisite: Admission to the teacher education program. Corequisite: Appropriate content methods course. A clinical experience taken concurrently with the methods course and designed to facilitate students’ development of pedagogical skills, effective thinking, and professional problem solving.

CIE 597 Internship in Elementary and Secondary Schools. Six hours.

CIE 605 Teaching Practices Across the World. Three hours. The focus of this course is research on teachers and their teaching practice in real classrooms. Prerequisite: Admission to Doc. Core

CIE 610 Effective Teaching Concepts and Processes. Three hours. Prerequisite: Graduate course in educational or cognitive psychology, graduate course in learning theory, or permission of the instructor. Examination of the knowledge base in effective teaching practice through in-depth study of the research literature on classroom instructional practices and conditions, and on the classroom teacher. Designed specifically for doctoral-level students.

CIE 620 Designing and Conducting Research on Classroom Teaching. Three hours. Prerequisite: Graduate course in research methods or permission of the instructor. The practice and use of reflection and action research with emphasis on developing professional skills in performing and applying research on classroom teaching and learning leading to teacher empowerment and school reform. Designed specifically for doctoral-level students.
CIE 623 Models and Strategies of Instruction. Three hours. 
Prerequisite: Admission to EdS or doctoral program.
Exploration of a variety of instructional models. Emphasis is on the current research of effective instructional practices in the secondary school.

CIE 625 Research Seminar in Science Curriculum. Three hours.
Designed to enable students to understand and synthesize current research and to develop a theoretical framework in the science curriculum for K–12.

CIE 626 Seminar in Research in Social Studies Curriculum. Three hours.
Designed to enable students to understand and synthesize current research and to develop a theoretical framework in social studies education for K–12.

CIE 627 Second Language Literacy. Three hours.
This course is designed to provide the student with an introduction to the major issues in research and instruction in second language (L2) literacy (reading and writing). An emphasis in this course is on literacy as a cognitive skill. The psycholinguistic processes of reading and writing in a second language will be addressed.

CIE 630 Curriculum for the Classroom Teacher. Three hours.
This course discusses the major issues in curriculum design and implementation for the classroom teacher. Designed specifically for doctoral-level students.

CIE 638 Seminar in ESL Education. Three hours.
Prerequisite: Permission of the instructor.
Examination and critical analysis of a wide range of perspectives from the professional literature on teaching and learning ESL.

CIE 640 Seminar in Teacher Education Processes. Three hours.
The course focuses on issues, problems, trends, and research associated with undergraduate and graduate teacher education and certification programs in Alabama, the U.S., and the world. Designed specifically for doctoral-level students.

CIE 644 Teacher-Intern Supervision. Three hours.
Organization and administration of student-teaching programs and methods of supervising student-teaching in schools. Designed specifically for doctoral-level students.

CIE 645 Professional Continuum: Teaching and Learning Communities. Three hours.
Research-based focus using theoretical frameworks to examine and analyze the professional development continuum.

CIE 650 Individual/Context Variables. Three hours.
This course deals with learning styles, personality factors, and social-environmental issues that affect curriculum and instruction. Theoretical and practical aspects are covered. Designed specifically for doctoral-level students.

CIE 656 Seminar in Foreign Language Education. Three hours.
Prerequisite: Permission of the instructor.
Examination and critical analysis of a wide range of perspectives from the professional literature on teaching and learning a foreign language.

CIE 660 Cognitive Perspectives on Teaching and Learning in K–12 Classrooms. Three hours.
The course focuses on systematic descriptions and analysis of major learning theories for classroom application. The intent is to contribute education insight toward more effective teaching through cognitive processes.

CIE 667 Foreign Language Education. Three hours.
Prerequisite: Permission of the instructor.
Designed for experienced language teachers, this course critically examines the professional literature and various methods of teaching foreign languages.
CIE 670 Critical Inquiry into Curriculum and Pedagogy. Three hours. 
Prerequisite: Advanced standing or permission of the instructor. 
Examinations of different conceptualizations of curriculum and pedagogy in K–12; emphasis on critical theory and postmodern theory and critique.

CIE 676 Advanced Linguistics. Three hours. 
This course involves advanced investigation within general areas of applied linguistic studies such as phonology, morphology, syntax, semantics, discourse, pragmatics, writing systems, etc., and their impact on second language acquisition.

CIE 680 Seminar in Mathematics Education Research. Three hours. 
Designed to enable students to understand and synthesize current research and to develop a theoretical framework in mathematics education.

CIE 682 Advanced Issues in ESL Education. Three hours. Critical examination of theoretical perspectives, methods, policies, major issues, and controversies pertinent to teaching second languages in the United States and around the world.

CIE 692 Advanced Fieldwork in Curriculum and Instruction. One to three hours. 
Prerequisite: Permission of the instructor. 
Field-based opportunities to study or work on topics or projects of collective concern.

CIE 693 Advanced Workshop in Curriculum and Instruction. One to three hours. 
Prerequisite: Permission of the instructor. 
In-class opportunities to study or work on topics or projects of collective concern. Topics vary. 
May be repeated. Offered according to demand.

PROGRAMS IN LITERACY EDUCATION COURSES

Course Descriptions (CRD)

CRD 510 Expanding Reading in the Elementary Grades. Three hours. 
A comprehensive study of the major factors involved in teaching reading at the intermediate grade levels. Techniques for teaching word recognition and comprehension skills are studied extensively.

CRD 511 Beginning Reading in PK–Primary Grades. Three hours. 
Attends to the theory and practice of beginning reading; key areas of study include diagnostic and evaluative procedures and the organization and implementation of appropriate instruction. A field component is required.

CRD 512 Improvement of Reading in Secondary Schools. Three hours. 
Prerequisite: Admission to Teacher Education Program. 
Corequisite: Content methods course and CSE 592. 
A comprehensive study of the major components involved in literacy instruction at the secondary level. A 10-hour field component is required. This course should be taken concurrently with the content methods course and CSE 592.

CRD 553 Foundation of Reading P–12. Three hours. 
Prerequisite: Permission of the instructor. 
A comprehensive study of the theoretical foundations and history of literacy development and instruction in PK–12 settings.

CRD 569 Intro to Literacy Education. Three hours. 
This course provides an overview to the foundations of literacy development and instruction grades PK-12.

CRD 590 Seminar in Literacy Coaching. Three hours.
Prerequisite: Permission of the instructor. A comprehensive study of the major theories of and components involved in providing professional development in literacy to teachers and schools.

**CRD 593 Practicum in Literacy Coaching.** Three hours. Prerequisite: Permission of the instructor. Provides reading specialist graduate students supervised opportunities to apply knowledge and skills of literacy coaching and professional development in a P-12 school setting.

**CRD 595 Practicum in Reading Education.** Three hours. Prerequisite: Permission of the instructor. Provides graduate students supervised opportunities to apply knowledge and skills in primary grade settings (preschool-2nd).

**CRD 654 Assessment and Instruction of At-Risk Readers.** Three hours. Prerequisite: Permission of the instructor. Provides advanced study of theoretical perspectives of diagnostic methods and materials for P-12 students at risk of reading failure.

**CRD 690 Advanced Seminar in Literacy.** Three hours. Prerequisite: Permission of the instructor. Provides students with a knowledge base of the relationship between theory, research, and practice in regard to K-12 literacy education.

**CRD 693 Advanced Workshop in Reading Education.** One to three hours. Prerequisite: Permission of the instructor. In-class opportunities to study or work on topics or projects of collective concern. Topics vary. May be repeated.

**CRD 695 Advanced Practicum in Reading Education.** Three hours. Prerequisite: Permission of the instructor. Provides graduate students supervised opportunities to apply knowledge and skills in intermediate grade settings (3rd-6th).

**CRD 696 Advanced Reading Specialist Practicum.** Three hours. Prerequisite: Permission of the instructor. Provides reading specialist graduate students supervised opportunities to apply knowledge and skills in middle school and high school settings (7th-12th).
Department of Special Education and Multiple Abilities (SPE)

Department Head: Associate Professor Sandra Nichols, Office: 201-B Graves Hall

See the Admission Criteria and Degree Requirements sections of this catalog for detailed information on those topics.

Special Education Program

Special education programs offered in the College are designed to help establish, maintain, and improve educational services to exceptional children by providing exemplary personnel resources. Courses of study leading to certification in the education of exceptional children (Class A and Class AA) and to the master of arts (MA) and educational specialist (EdS) degrees are offered. Emphases are available in gifted and talented, collaborative education, early childhood special education, and severe disabilities (Class A only).

The doctor of education (EdD) degree program is offered to provide competencies in teacher education, administration, and research. In preparing for any of these three professional activities, EdD students usually specialize in one of the fields within special education; they are also expected, however, to acquire broad-based information across the spectrum of exceptional children and youth. The doctor of philosophy (PhD) program is designed to prepare major researchers for roles as university professors or administrators.

The sequence of advanced study followed by the postgraduate student in special education is contingent on the skills and background brought to the program and on the student's career plans.

Special education faculty are involved in a number of demonstration and research projects designed to develop and evaluate innovative procedures for training professionals, paraprofessionals, and parents to work with various types of exceptional children. These projects are also concerned with the development and evaluation of instructional programs and techniques for exceptional individuals. Students have access to an array of practicum and research opportunities from a variety of resources.

Certification

The Alabama State Board of Education grants a Class A professional certificate with an endorsement in gifted and talented, early childhood special education, collaborative teacher (K–6), collaborative teacher (6–12), or severe disabilities. To be eligible, students must hold appropriate Class B certification and must complete all requirements for the MA degree in the chosen program, including a comprehensive exam, state assessments (if applicable), and the Praxis II (if required), as described in this catalog.

The EdS in special education program leads to Class AA certification with an endorsement in gifted and talented, early childhood special education, collaborative teacher (K–6), or collaborative teacher (6–12). To be eligible, students must hold appropriate Class A certification and must complete the appropriate number of semester hours of work in an approved program beyond the master's degree and successfully complete a comprehensive exam and state required tests as applicable.

Alternative Class A Certification (Initial Certification)

Collaborative Education [K-6, 6-12, or K-12]  
Early Childhood Special Education  
Gifted and Talented Education

To enter the Class A alternative programs of study in collaborative education, early childhood special education, or gifted and talented education, an appropriate bachelor's degree from a regionally accredited institution must be held. A transcript evaluation must also be completed. Refer to Nontraditional, Alternative Initial Teacher Certification Program in the College of Education section of this catalogue for important information.
Class A Certification (Traditional)
Collaborative Education [K-6, 6-12, or K-12]
Early Childhood Special Education
Gifted and Talented Education
Severe Disabilities

To enter the Class A programs of study in collaborative education, early childhood special education, or gifted and talented education, the appropriate prior certification must be held.

To enter the Class A program of study in severe disabilities, the appropriate prior certification in special education must be held.

Class AA Certification
Collaborative Education [K-6, 6-12, or K-12]
Early Childhood Special Education
Gifted and Talented Education

To enter the Class AA programs of study in collaborative education or early childhood special education, the appropriate prior certification must be held.

To enter the Class AA programs of study in gifted and talented education, the appropriate prior certification must be held.

Degree Requirements
Pay careful attention to the Degree Requirements section of this catalog for important information on time limits, plan of study, advancement to candidacy, etc.

Financial Aid
Graduate assistantships, student stipends, and fellowships in special education are available in limited numbers. Interested students must complete the financial assistance form, and/or the application for graduate teaching or research assistant form.

MA Program Admission
In addition to meeting admission requirements for the Graduate School (Admission Criteria) and the College of Education (General Admission), students interested in the special education programs should be aware of the state certification program admission requirements listed in the chart above.

Nontraditional, Alternative Master’s, Initial Teacher Certification Program
The Special Education Program offers teacher-education programs that lead to Alabama Class A certification in collaborative teacher (K–6) (special education), or collaborative teacher (6 –12) (special education), early childhood special education, and gifted, but do not require Class B certification in any teaching field. These programs are designed to allow individuals with undergraduate degrees in nonteaching fields to enter the field of education.

Admission to a nontraditional, alternative certification program in special education requires full admission to the Graduate School and the completion of specified undergraduate prerequisite courses. Applicants seeking admission to the alternative master’s program should contact the Office of Student Services & Certification in the College of Education for a transcript evaluation to determine prerequisite courses. A passing score on each subtest of the Basic Skills Assessments of the Alabama Educator Certification Testing Program (AECTP) is also required for admission. (Information about the Basic Skills Assessment is available online at https://actapps.act.org/wkala/wkala or in Student Services, 104 Carmichael Hall.) The MA degree is awarded when program requirements are completed.

EdS Program Admission
In addition to meeting the Graduate School's admission requirements, a student interested in the EdS program must have earned an MA with appropriate certification.
EdD and PhD Program Admission
Prerequisites for admission to doctoral work in special education are an earned MA degree in special education (or a related area) and three years of appropriate experience, defined as three years of work in agencies serving children and youth, one year of which must have been spent in direct interaction with exceptional children on a full-time basis. Graduate faculty members individually evaluate and collectively discuss admission applications.

Course Descriptions

SPE 500 Introduction to Exceptional Children and Youth. Three hours. Introduction to programs and problems of children and youth who deviate from the norm in physical, mental, emotional, and social characteristics.

SPE 501 Diagnosis and Assessment of Exceptional Children and Youth. Three hours. Comprehensive study of diagnosis and assessment, emphasizing concepts of tests and measurements, formal and informal assessment, test administration, and use of diagnostic results in educational intervention.

SPE 502 Advanced Behavior Management for Special Educators. Three hours. Prerequisite: SPE 435 or equivalent. Concepts and principles of behavior change and management; practical experience in developing plans to prevent and remedy behavior problems. Research project required.

SPE 503 Master's Seminar in Special Education. Three hours. Critique of research and research problems in current special education issues.

SPE 506 Family Intervention with Exceptional Children and Youth. Three hours. Examination of the effects of an exceptional child on the family, and the various approaches to intervention with the family.

SPE 505 Professionalism. Two hours. Prerequisites: Satisfactory completion of all MAP 300-level classes; admittance to the Graduate School, admittance to the graduate Multiple Abilities Program cohort. The focus is on methods and materials for teaching music to children in grades 4–6.

SPE 509 The Learner. Two hours. Prerequisites: Satisfactory completion of all MAP 300-level classes; admittance to the Graduate School, admittance to the graduate Multiple Abilities Program cohort. The focus is on methods and materials for teaching music to children in grades preschool–3.

SPE 511 Reading and Research in Special Education. Variable credit (registration for fewer than 3 hours requires permission of the program chairperson). To assist master's students with intensive review of new research in a particular area of exceptionality.

SPE 514 Teacher Consultant Models in Special Education. Three hours. Introduction to various direct and indirect service delivery models for students with mild disabilities; consultant techniques demonstrated.

SPE 516 Communication and Collaboration. One hour. Prerequisites: Satisfactory completion of all MAP 300-level classes; admittance to the Graduate School, admittance to the graduate Multiple Abilities Program cohort. The focus is on developing number sense and mathematical power in children at grades K–6.

SPE 517 Facilitating Learning. One hour. Prerequisites: Satisfactory completion of all MAP 300-level classes; admittance to the Graduate School, admittance to the graduate Multiple Abilities Program cohort. The focus is on curricular materials that support children’s reasoning in elementary
school mathematics.

**SPE 518 Field Experience.** Six hours.  
Prerequisites: Satisfactory completion of all MAP 300-level classes; admittance to the Graduate School, admittance to the graduate Multiple Abilities Program cohort.  
The course consists of a clinical placement in the Summer Enrichment Workshop, a program for high-ability children.

**SPE 527 Professionalism.** Two hours.  
Prerequisites: Completion of all previous MAP coursework with a grade of “B” or better.  
The major activity of the semester consists of a 12-week internship in a general education classroom. Professional discourse, dress, ethics, and decision making receive intensive scrutiny.

**SPE 528 The Learner.** Two hours.  
Prerequisite: Completion of all previous MAP coursework with a grade of “B” or better.  
The major activity of the semester consists of a 12-week internship in a general education classroom. Students will gradually assume more and more of the responsibility for planning and teaching in responsive, developmentally appropriate ways that support the learning of ALL children in the classroom, culminating in a 2-week “solo” teaching episode.

**SPE 530 Communication and Collaboration.** Two hours.  
Prerequisite: Completion of all previous MAP coursework with a grade of “B” or better.  
The major activity of the semester consists of a 12-week internship in a general education classroom. Students will continue to develop and be evaluated on the communication and collaboration abilities they have developed in previous MAP coursework.

**SPE 534 Facilitating Learning.** Two hours.  
Prerequisite: Completion of all previous MAP coursework with a grade of “B” or better.  
The major activity of the semester consists of a 12-week internship in a general education classroom. Students will assume responsibility for teaching all content areas in the elementary curriculum, including music, dance, and art by means of an integrated curriculum. The integrated unit they produce will be their major product of the semester.

**SPE 535 Field Experience.** Three hours.  
Prerequisites: Completion of all previous MAP coursework with a grade of “B” or better.  
The major activity of the semester consists of a 12-week internship in a general education classroom.

**SPE 538 Research Seminar.** One hour.  
Prerequisite: Completion of all previous MAP coursework with a grade of “B” or better.  
This seminar will acquaint students with relevant areas of research in general and special education. It provides a scaffolded approach to the development of a research proposal that will be required in the fifth semester of MAP. Attention is given to selecting problem areas for investigation by reviewing historical, descriptive, and experimental methods of research. Students will read a variety of research articles and learn to identify an appropriate question for various types of inquiry. They will study the types of data that should be collected, the types of analyses typically done with such data, and how to relate their study’s findings to the question for which the study was undertaken.

**SPE 550 Professionalism.** Two hours.  
Prerequisite: Completion of all previous MAP coursework with a grade of “B” or better.  
The major activity of the semester consists of a 12-week internship in a special education classroom. Professional discourse, dress, ethics, and decision making receive intensive scrutiny.

**SPE 554 The Learner.** Two hours.  
Prerequisite: Completion of all previous MAP coursework with a grade of “B” or better.  
The major activity of the semester consists of a 12-week internship in a special education classroom. Students will gradually assume more and more of the responsibility for planning and teaching in responsive, developmentally appropriate ways that support the learning of
ALL the children in the classroom, culminating in a 2-week “solo” teaching episode.

**SPE 556 Communication and Collaboration.** Two hours.  
Prerequisite: Completion of all previous MAP coursework with a grade of “B” or better.  
The major activity of the semester consists of a 12-week internship in a special education 
classroom. Students will continue to develop and be evaluated on the communication and 
collaboration abilities they have developed in previous MAP coursework.

**SPE 557 Facilitating Learning.** Two hours.  
Prerequisite: Completion of all previous MAP coursework with a grade of “B” or better.  
The major activity of the semester consists of a 12-week internship in a special education 
classroom. Students will produce a case study of one struggling learner, including an analysis 
of the student’s social and academic environment, an IEP, and lesson plans from the previous 
semester’s integrated unit that show how they would be modified to meet the student’s 
academic and social needs.

**SPE 558 Field Experience.** Three hours.  
Prerequisite: Completion of all previous MAP coursework with a grade of “B” or better.  
The major activity of the semester consists of a 12-week internship in a special 
education classroom.

**SPE 560 Research Seminar.** One hour.  
Prerequisite: Completion of all previous MAP coursework with a grade of “B” or better.  
In this course, students will design and implement action research in the special education 
classroom in which they are completing their internship. Students will develop an instructional 
or behavioral intervention, design and implement an action research validation study, collect 
data, analyze it, and write up their research in APA style. Students will then prepare an oral 
presentation of their research for the MAP Differentiated Instruction Conference. The action 
research resulting from this seminar will be used as a form of master’s thesis in lieu of a 
master’s comprehensive examination.

**SPE 571 Education of Young Children with Disabilities.** Three hours.  
An introductory course to the field of early childhood special education, including rationale, 
legal issues, and characteristics of children from birth through kindergarten.

**SPE 575 Practicum in Early Childhood Special Education.** One to six hours.  
Prerequisite: Teacher certification in special education or a related area. Completion of 80% 
of curriculum. 3.0 GPA.  
Involves a demonstration of teaching expertise of candidate with students identified with 
severe/profound and/or multiple disabilities in special and general education classrooms.

**SPE 576 Assessment of Young Children.** Three hours.  
Prerequisite: SPE 571 or permission of the instructor.  
Selection, administration, and interpretation of assessments of young children (birth through 
kindergarten).

**SPE 578 Methods of Teaching Young Children with Disabilities.** Three hours.  
Prerequisite: SPE 571 or permission of the instructor.  
Use of curricula, materials, and management techniques for young children (birth through 
kindergarten) with disabilities.

**SPE 575 Practicum in Early Childhood Special Education.** One to six hours.  
Prerequisite: Teacher certification in special education or a related area. Completion of 80% 
of curriculum. 3.0 GPA.  
Involves a demonstration of teaching expertise of candidate with students identified with 
severe/profound and/or multiple disabilities in special and general education classrooms.

**SPE 579 Internship in Education of Young Children with Diverse Abilities.** Three to 
nine hours. Prerequisites: SPE 571, SPE 576, and SPE 578.  
Intensive supervised teaching experience with young children with and without disabilities.
SPE 581 Psychology of Gifted and Talented Children and Youth. Three hours. Examination of the nature of youth with high potential in multiple areas. Contemporary theory, research, and the relationship between definition/identification and educational planning are considered.

SPE 582 Teaching the Gifted and Talented. Three hours. Use and evaluation of teaching-learning methods for education of the gifted and talented, including consideration of roles, expectations for learning, and organizational procedures.

SPE 583 Creative Problem Solving Seminar. Three hours. A guided sequence of exercises and experiences leading to increased personal creative behavior, with emphasis on methods for nurturing creative talent in students of all ages.

SPE 584 Special Populations in Gifted Education. Three hours. Examination of a variety of administrative designs, curriculum options, instructional models, and strategies to meet the unique cognitive and affective needs/abilities of special populations of gifted students.

SPE 585 Teaching Thinking Skills: Integrating Programs. Three hours. Prerequisite: SPE 582 or permission of the instructor. Corequisite: SPE 589. Survey of existing thinking-skills programs and techniques for creating new programs for thinking. Emphasis is on integrating thinking skills into gifted education and regular education.

SPE 586 Social & Emotional Components of Talent Development. Three hours. Explores current research, psychological theory and practical counseling techniques relevant to the social and emotional components of giftedness. Some topics include perfectionism, gender issues, underachievement, and special populations.

SPE 587 Indiv Needs Talents Classroom. Three hours. This course will outline instructional and managerial techniques that can be used in the grade level or heterogeneous classroom to address the individual learning needs, strengths, styles, and preferences of all students.

SPE 589 Internship in Gifted/Talented. Three to nine hours. Prerequisites: SPE 581 and SPE 582. Corequisite: SPE 585. Intensive, supervised teaching experience in programs for gifted and talented.


SPE 591 Academic Methods: Elementary. Three hours. Designed to develop skills in the use of curriculum, materials, and strategies for students with disabilities at the elementary school level.

SPE 592 Academic Methods: Secondary. Three hours. Designed to develop skills in the use of curriculum, materials, and strategies for students with disabilities at the secondary level.

SPE 593 Introduction to Severe Disabilities. Three hours. An intensive study of the background and current perspective on severe disabilities. Emphasis is on developing professional knowledge.

SPE 594 Methods for Severe Disabilities. Three hours. Emphasizes educational programming, subject matter, professional responsibilities of teachers and related service personnel, curriculum development, communication, and physical management and handling procedures of individuals with severe disabilities.
SPE 595 Practicum in Severe Disabilities Education (K-12). One to six hours. 
Prerequisite: Teacher certification in special education or a related area. Completion of 80% of curriculum. 3.0 GPA. 
Involves a demonstration of teaching expertise of candidate with students identified with severe/profound and/or multiple disabilities in special and general education classrooms.

SPE 596 Practicum in Collaborative (K-6 or 6-12). One to six hours. 
Involves a demonstration of teaching expertise of candidate with students identified with severe/profound and/or multiple disabilities in special and general education classrooms.

SPE 597 Transition Methods for Adolescents with Disabilities. Three hours. 
Focuses on the strategies, methods, curriculum, and measurement for facilitating an effective transition from school to adulthood of adolescents with disabilities.

SPE 598 Internship in Special Education. Three to nine hours. 
Prerequisites: SPE 502 and SPE 591. 
Intensive, supervised teaching experience in a special education program.

SPE 600 Doctoral Seminar in Special Education. Three hours. 
Required for all first-year doctoral students; diagnostic in function. Activities include examination of career goals and assessment of skills in written and oral presentations. Offered fall semester.

SPE 601 Seminar: College Teaching in Special Education. Three hours. 
Prerequisite: SPE 600. 
Course structure, lecturing and other delivery techniques, student evaluation, and practicum supervision are included among topics that are reviewed to develop skills in college training. Offered fall semester.

SPE 602 Seminar: Research in Special Education. Three hours. 
Prerequisite: SPE 600. 
Focuses on the unique aspects of the exceptional population in relationship to typical statistical and research design procedures. Offered spring semester.

SPE 606 Topical Seminar in Special Education. Three hours. 
Prerequisite: Permission of the instructor. 
May be repeated for credit. Selected topics, review and critique of current literature, research problems, and methodology.

SPE 609 Practicum in Special Education. Three to six hours. 
Designed for advanced graduate students. Students practice effective supervision skills or college teaching skills under the direction of the course instructor.

SPE 611 Independent Study in Special Education. Three to nine hours. 
Intensive investigation of a specific aspect of special education, by one student under the supervision of a faculty member in the student's area of concentration.

SPE 612 Readings and Research in Special Education. Three to twelve hours. 
For doctoral students, an opportunity to initiate, develop, and successfully defend a dissertation topic dealing with a problem of magnitude in the field of special education.

SPE 613 Consultation Processing in Special Education Programs. Three hours. 
Training in human-relations techniques and administrative strategies designed to facilitate communication and interaction with individuals and groups in special education programming.

SPE 614 Assessment of Teaching and Learning in Special Education. Three hours. 
Strategies for curricular designs, teaching methods, and program models using informal and observational techniques to assess teaching effectiveness and learner outcomes (academic and behavioral) in special education programs.

SPE 616 Advanced Professional Development. Three hours.
Theories and types of training and development programs will be reviewed and analyzed, needs assessments will be explored and conducted, and professional development sessions will be developed, facilitated, and evaluated.

**SPE 617 Special Education Leadership, Policy and Law.** Three hours. This course is designed to instruct the ethical, legal, and leadership principles that govern the field of special education. It includes emphasis on preparing for administrative positions in special education programs in local education agencies.

**SPE 621 Issues in Special Education: Early Childhood.** Three hours. Discussion of current research and investigation of major issues in the education of young students with disabilities, focusing on best practices, assessment and learning, programming, evaluation, community involvement, and facilitation.

**SPE 622 Advanced Curriculum Workshop: Early Childhood Special Education.** Three hours. This course assists leaders in early childhood special education in applying studies in basic disciplines to the development and implementation of appropriate curriculum for young students with disabilities. It includes emphasis on application of diverse teaching models and the use of a variety of program alternatives and skills in designing, managing, and evaluating program alternatives.

**SPE 623 Issues in Collaborative Education.** Three hours. Discussion of current research and investigation of major issues in the education of students with disabilities, focusing on best practices, assessment and learning, programming, evaluation, community involvement, and facilitation.

**SPE 624 Advanced Curriculum Workshop in Special Education: Collaborative.** Three hours. This course assists leaders in collaborative education in applying studies in basic disciplines to the development and implementation of appropriate curriculum for students with disabilities. It includes emphasis on application of diverse teaching models and the use of a variety of program alternatives and skills in designing, managing, and evaluating program alternatives.

**SPE 681 Issues in Gifted Education.** Three hours. Discussion of current research, and investigation of major issues in the education of gifted and talented youth, focusing on definition, identification, programming, evaluation, community involvement, and guidance.

**SPE 682 Advanced Curriculum Workshop in Gifted Education.** Three to six hours. Prerequisites: SPE 581 and SPE 582, or permission of the instructor. Assists leaders in gifted education in applying studies in basic disciplines to the development and implementation of appropriate curriculum for the gifted. Emphasis is on application of diverse teaching models and the use of a variety of program alternatives and skills in designing, managing, and evaluating programs.

**SPE 699 Dissertation Research.** Variable credit. Three-hour minimum.
THE UNIVERSITY OF ALABAMA GRADUATE CATALOG

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10.10  DEPARTMENT OF KINESIOLOGY (KIN)
Department Head: Professor Matthew Curtner-Smith, Office: 106 Moore Hall

The Department of Kinesiology offers the master of arts degree in Human Performance Studies with these specializations: sport management, exercise science, human performance, and sport pedagogy. The latter three programs are available under Plan I (thesis) and Plan II (nonthesis). The sport management program involves completing a “capstone experience” project. In addition, there is a sport management program that leads to Class A certification.

There is also an alternative master’s program in sport pedagogy which leads to Class A certification for those with an undergraduate degree in a non-teaching field. The degree with an emphasis in sport pedagogy leads to Class A certification, unless the student prefers a nonteaching degree. Programs leading to the doctor of philosophy (PhD) degree in human performance with emphases in sport pedagogy and exercise science are also offered.

There are admission requirements specific to the department in addition to those in the Graduate Catalogs on Admission Criteria. Please pay special attention to the Degree Requirements section of this catalog for important information on transfer of course work, time limits, plan of study, admission to candidacy, etc.

For the College of Education, note the sections on General Admission, Master’s, Professional Certification, and Doctoral earlier in this catalog.

 Course Descriptions

**KIN 500 Sociology of Sport.** Three hours.
Examines the institution of sport from a sociological perspective. Provides an opportunity to critically analyze the assumptions surrounding the social significance of sport through a process of reflective thought.

**KIN 506 Techniques of Research.** Three hours.
Designed to acquaint the student with the types of research and the methods and materials necessary for scientific inquiry. Includes the development of a research proposal, with emphasis on form and style.

**KIN 507 Laboratory Techniques.** Three hours.
Theoretical and practical understanding of physiological instrumentation and measurement in physical education, including practical laboratory experiences, as preparation for graduate research or other research opportunities.

**KIN 508 Perceptual-Motor Development.** Three hours.
Perceptual-motor development of infants and young children. Current philosophies, theories, and methods; laboratory work in movement exploration. A clinical experience is required.

**KIN 510 Teaching and Supervising Elementary School Physical Education.** Three hours.
Open to elementary education and physical education majors. Reviews the essential concepts for successfully teaching grades 1–6; learning, function, and duties of consultant.

**KIN 512 Physical Education Curriculum.** Three hours.
Program content and curriculum planning in grades 1–12 and higher education; includes developing curriculum plan applicable to one's need.

**KIN 538 Advanced Adapted Physical Education.** Three hours.
Pertinent information concerning legislation, mainstreaming, the physical education IEP, and movement problems of individuals who deviate from the norm. A clinical experience is required.

**KIN 551 Sport Management Internship.** Three hours.
This course provides students with the opportunity to gain applied, practical experience in a suitable sport management related setting.

**KIN 552 Legal Issues in Sport.** Three hours.  
An overview of legal issues that frequently arise in the context of sport and physical activity. Emphasis will be placed on how sport managers should respond to specific situations based on the law.

**KIN 553 Sport Facility Event Manage.** Three hours.  
Provides students with an understanding of the factors involved in planning, designing, equipping, and managing sport facilities and event logistics.

**KIN 555 Sport Finance.** Three hours.  
An overview of the budgeting process, sources of revenue, types of expenditures, issued and innovations in financing for sport management.

**KIN 562 Administration of Athletics.** Three hours.  
Problems and issues in organizing and administering secondary and college athletic programs.

**KIN 566 Evaluation in Physical Education.** Three hours.  
Covers practical aspects of measurements and evaluation in schools and colleges to measure clients, patients, and students. A practical measurement/evaluation on project is completed.

**KIN 585 Laboratory and Field Experience.** One to six hours each.  
Provides for teaching laboratory, internship, and/or practicum experiences, according to individual needs and goals.

**KIN 588 Sport Marketing and the Media.** Three hours.  
This course examines the various components of sport marketing and consumer culture. Particular emphasis is given to the influence of the media in promoting sporting goods and products.

**KIN 590 Sports/Dance Workshop.** One to six hours.  
In-depth study of physical education subject matters (gymnastics, dance, fitness, aquatics, track and field, and sports/games) focusing on content, theoretical frameworks, and educational perspectives. Students enroll in 1-credit-hour workshops according to individual needs and certification requirements.

**KIN 592 Physiology of Exercise.** Three hours.  
Designed to be an overview of the human physiological response to exercise.

**KIN 593 Organization and Implementation of Adult Fitness Programs.** Three hours.  
Designed to provide practical experience in organizing and implementing adult fitness programs.

**KIN 595 Workshop in Physical Education.** One to three hours.  
This course is designed to help students improve their ability to teach elementary, secondary, and/or college physical education and understand theory and research as it is applied in each setting.

**KIN 596 Independent Study in Physical Education.** One to three hours.  
Designed to provide the opportunity for independent study in a specific area of physical education.

**KIN 598 Nonthesis Research.** Three hours.  
Experimental or analytical investigation of problems in physical education.

**KIN 599 Thesis Research.** Three hours.  
Research in a selected area of physical education.

**KIN 602 Readings in Physical Education.** Three hours.  
An independent readings course for doctoral students.

**KIN 603 Special Projects in Physical Education.** Three hours.  
Experimental or analytical investigations of problems in physical education, arranged on an
independent basis for doctoral students.

**KIN 604 Seminar in Physical Education.** Three hours. Critical issues in athletics, curriculum, instruction, evaluation, research, fitness, individual differences, and financial support.

**KIN 612 Research in Physical Education/Teacher Education.** Three hours. An examination of the development, design, and application of research in physical education/teacher education.

**KIN 622 Analysis of Research on Teaching in Physical Education.** Three hours. A thorough analysis of published research on teaching in physical education.

**KIN 632 Systematic Observation in Physical Education.** Three hours. An examination of analytical techniques used to collect and evaluate data related to teacher and student behaviors. Instruction in the development and use of systematic observation instruments is provided.

**KIN 642 Instructional Design in Physical Education in Higher Education.** Three hours. An examination of methods, applications, and current research related to instructional design.

**KIN 685 Fieldwork and Laboratory Experience.** One to six hours each. Arranged on an independent basis for doctoral students. Participation and research in schools and agencies.

**KIN 690 Exercise in Health and Disease.** Three hours. Prerequisite: **KIN 592.** Designed to acquaint the student with the health benefits of regular physical activity and exercise. The most recent research literature is critically analyzed.

**KIN 691 Research Studies in Sociology of Human Performance.** Three hours. Provides students with an in-depth understanding of the literature on the occupational socialization of physical education teachers.

**KIN 692 Seminar in Exercise Physiology.** Three hours. Prerequisite: **KIN 592.** Provides an opportunity to study in depth the scientific literature related to various exercise physiology topics. May be taken more than once.

**KIN 698 Nondissertation Research.** Three hours. Prerequisite: Doctoral student standing. Experimental or analytical investigation of problems in kinesiology.

**KIN 699 Dissertation Research.** Three to twelve hours. Design, research, and/or analytical investigation of a problem in the field of kinesiology to satisfy the dissertation requirement for the doctoral degree.
Graduate work in Music Education is an option through the Curriculum and Instruction department in the College of Education. Under Curriculum and Instruction, Music Education concentrations are available at the MA, nontraditional initial certification, EdS, EdD, and PhD degree levels. All programs, except the doctoral programs, can lead to Alabama teacher certification.

Admission Requirements

MA in Curriculum & Instruction (Music Education option)
Masters candidates must hold valid Alabama Class B or approved equivalent certification to be considered for admission. Applicants for the Music Education option are required to demonstrate professional competence in music theory and music history; to submit a tape of an ensemble performance or teaching sample; and, if requested, to perform a placement audition on the major instrument prior to the completion of 12 hours of graduate study. If requested, applicants will interview with the music education faculty prior to an admission decision. Contingent upon faculty and Graduate School approval, conditional admission is granted in some instances.

EdS, EdD, and PhD in Curriculum & Instruction (Music Education option)
Applicants to the Music Education option under Curriculum and Instruction of the College of Education must successfully complete a formal screening interview with the music education faculty prior to an admission decision, and doctoral applicants must submit a writing sample. Applicants are required to demonstrate professional competence in music theory and music history; to submit a tape of an ensemble performance or teaching sample; and, if requested, to perform a placement audition on the major instrument prior to the completion of 12 hours of graduate study. It is highly recommended that applicants have a minimum of three years’ full-time contractual teaching experience prior to beginning a post-masters degree program; applicants for the PhD program should have either a bachelor’s or master’s degree in music education. Contingent upon faculty and Graduate School approval, conditional admission is granted in some instances.

Admission Requirements for the Graduate School (Admission Criteria) and the College of Education (General Admission) are detailed in earlier sections of this catalog.

Degree Requirements

MA in Curriculum and Instruction (Music Education option)
Two MA plans in Music Education (Plan I and Plan II, below) are offered under Curriculum and Instruction in the College of Education. Both plans presume an undergraduate degree in music education from an accredited school and a valid Alabama Class B teaching certificate (or an approved equivalent teaching certificate). Both Plan I and Plan II lead to Alabama Class A, masters level, teaching certification. Both require compliance with the State-approved certification program and a minimum of 30 graduate semester hours as follows: (a) required music education courses, 6 hours; (b) foundations of professional studies, 3 hours; (c) educational research, 3 hours; (d) technology, 3 hours; (e) faculty-approved teaching field, 15 hours; and, additional requirements/electives, 0-3 hours. Candidates under Plan I for the master's degree must write a thesis (6 semester hours of thesis research may be used toward the degree). Plan II candidates must earn a minimum of 30 graduate semester hours. No music education master’s degree programs are available without satisfying Alabama certification requirements; those earning a master’s degree must be eligible for recommendation for Alabama Class A music education (P-12) teaching certification.
**Nontraditional, Alternative Initial Teacher Certification Program**

The Alternative Certification Master's Degree Program is designed for people who have not completed an undergraduate degree in music education, but who possess an undergraduate degree in an area of music from a school accredited by the National Association of Schools of Music. It requires a minimum of 39 course credits as follows: (a) curriculum and teaching, 3 hours; (b) professional studies, 6 hours; (c) survey of special education, 3 hours; (d) technology, 3 hours; (e) evaluation of teaching and learning, 3 hours; (f) teaching reading or reading in content area, 3 hours; (g) music and music education, 12 hours; (h) internship, 6 hours. Some undergraduate prerequisites are also required. The fulfillment of all requirements leads to recommendation for the Alabama Class A teaching certificate in music education (P-12) and the master's degree. Prior to an admission decision, applicants must request a transcript evaluation of all college-level coursework from the Office of Student Services and Certification, College of Education, Box 870231, Tuscaloosa, AL 35487-0231 (205) 348-6073. Contact the **Office of Student Services** for information about the **Request for Evaluation**.

**EdS in Curriculum & Instruction (Music Education option).** A minimum of 30 hours of appropriate work beyond the MA degree, including completion of a research project, is required for the educational specialist (EdS) degree. The fulfillment of these requirements leads to the Alabama Class AA certificate in music education (P-12). The total hours of graduate work, including the MA degree, must be 60 hours. Those pursuing certification options must be certain their programs of study meet all certification requirements according to programs approved by the Alabama Department of Education. Courses used to qualify for a lower level supporting certificate cannot be used again in a higher level certification program.

**EdD in Curriculum & Instruction (Music Education option).** The doctor of education degree in curriculum and instruction (music education option) is designed to include a broad field of study in a major area of specialization. Selection and sequence of courses are contingent on the skills, background, and professional goals of the student. Each student’s program will include courses in music, music education, professional education, and research.

**PhD in Curriculum & Instruction (Music Education option).** The doctor of philosophy degree in curriculum and instruction (music education option) is designed to include a broad field of study in a major area of specialization. Selection and sequence of courses are contingent on the skills, background, and professional goals of the student. Each student’s program will include courses in music, music education, professional education, and research. Degree requirements are noted on the official Plan of Study for the various degrees/tracks. These documents are available from the chairperson or administrative staff for the department. All doctoral students must have a completed Plan of Study approved by the Graduate School no later than the semester during which the student will complete 30 semester hours of UA and/or transfer credit for the doctoral degree.

A department-approved **Admission to Candidacy for the Doctoral Degree** is submitted to the Graduate School as soon as possible after passing the comprehensive (preliminary) examination. For details on Plan of Study, Admission to Candidacy, and all other degree requirements, visit the **Degree Requirements** section of this catalog.

**General Requirements**

Before 12 hours of graduate study are completed in any graduate degree program, students enrolled in music education graduate programs are required to demonstrate professional competence in music theory and music history and, if requested, to perform a placement audition on the major instrument. Information about specific examinations can be obtained through the Music Education Office, Box 870366, Tuscaloosa, AL 35487-0366 (205) 348-6054.

Graduate-level music education courses which meet requirements for specific State-approved...
Certification programs (Class A, Class AA) are typically offered during summer sessions. Applicants for music education graduate degrees should anticipate that summer enrollment may be necessary to complete degree requirements. Questions concerning the rotation of course offerings should be directed to the **Music Education Department**; Box 870366; Tuscaloosa, AL 35487-0366; (205) 348-6054.

The content of all graduate programs in music education is determined, in part, by the background and goals of the individual student. Each program will include graduate courses in music education (choral, instrumental, or general) and professional education, and may include studio courses and other graduate study as indicated by the student’s background and interests in consultation with his or her advisor. It is recommended that each student contact his or her advisor during the first term of graduate study in order to plan the program.

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Graduate work in Music Education is an option through the **Curriculum and Instruction Department** in the College of Education. Interested applicants should contact **Music Education**, Box 870366, Tuscaloosa, AL 35487-0366 (205) 348-6054, or speak with a music education advisor.

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### Course Descriptions

**MUE 500 Foundations of Music Education.** Three hours. 
Investigation of the purposes and functions of music education from antiquity to the present. Philosophical foundations and a chronological survey of historical issues related to the inclusion of music in general education will also be discussed.

**MUE 502 Sociology of Music and Music Education.** Three hours.  
This course explores the literature on sociological aspects of music and music education, including psychological, cultural and teacher role development.

**MUE 522 Curricular Trends in Elementary Music.** Three hours.  
Instructional materials, lesson planning, teaching practices and procedures, research, and the evaluation of pupil achievement.

**MUE 525 Choral Techniques and Materials.** Three hours.  
Organization, rehearsal, programming and performance of choral groups.

**MUE 526 Instrumental Techniques and Materials.** Three hours.  
Organization, rehearsal, programming and performance of instrumental groups.

**MUE 528 Curricular Trends in General Music Education.** Three hours.  
Prerequisites: MUE 500 or permission of instructor.  
Analysis of current trends in general music and their influence on techniques and materials for P-12 and 2-year community colleges.

**MUE 530 Music Education Curriculum Theory and Development.** Three hours.  
Analysis of music curricula and study of the development process.

**MUE 532 Research, History, Aesthetics Mus Ed.** Three hours.  
This course will address various techniques into the history and aesthetics of music education.

**MUE 535 Curriculum Projects in Music Education.** One to three hours.  
The design, proposal, implementation, evaluation, and reporting of a curriculum project or an improved instructional procedure in music. Independent study.

**MUE 540 Research in Music Education.** Three hours.  
Introduction to research study in music education.

This course explores applied research methods in classroom management and psychology through examination of selected research studies and behavioral projects.

**MUE 560 Functional Instruments.** One-half to one hour.

**MUE 580 Intro. Grad. Study Music Ed.** Three hours.
Introduction designed to prepare students for the application of scholarly thinking to topics in the areas of music psychology, teacher training and music education.

**MUE 586 Marching Band Techniques.** Three hours.
Prerequisites: graduate standing
Fundamentals of marching, maneuvering, and preparation and presentation of formations.
Offered spring and summer terms as needed.

**MUE 589 Clinical Exper. Music Ed.** Two to six hours.
Part-time supervised teaching experience in secondary instrumental music education. Four-twelve hours weekly for 14 weeks in Tuscaloosa area public schools.

**MUE 590 Seminar in Music Education.** One to three hours.
Study of special topics in music education.

**MUE 591 Workshop in Music Education.** One to three hours.
Special topics in music education focusing on in-class activities and materials directly applicable to general, band, and orchestra music instruction. Typically focused for practicing teachers, with the bulk of the expected work to be accomplished in class.

**MUE 597 Practicum in Music Education.** Three to twelve hours.

**MUE 598 Non-thesis Research.** Variable credit.

**MUE 599 Thesis Research.** Variable credit.

**MUE 600 Foundations of Music Education.** Three hours.
Advanced investigation of the purposes and functions of music education from antiquity to the present. Philosophical foundations and a chronological survey of historical issues related to the inclusion of music in general education will also be discussed.

**MUE 602 Sociology of Music and Music Education.** Three hours.
This course explores the literature on sociological aspects of music and music education, including psychological, cultural and teacher role development.

**MUE 625 Choral Techniques and Materials.** Three hours.
Advanced organization, rehearsal, programming and performance of choral groups.

**MUE 626 Instrumental Techniques and Materials.** Three hours.
Advanced organization, rehearsal, programming and performance of instrumental groups.

**MUE 628 Curricular Trends in General Music Education.** Three hours.
Prerequisites: MUE 530, MUE 630, or permission of the instructor.
Advanced analysis of current trends in general music and their influence on techniques and materials for P-12 and two-year community colleges. Offered according to demand.

**MUE 630 Music Education Curriculum Theory and Development.** Three hours.
Prerequisite: Master's degree.
Advanced analysis of music curricula and study of the development process.

**MUE 631 PhD Diagnostic/Adm. Exam.**
Examination required prior to completion of no more than six hours of study for admission to a PhD program in Music Education.

**MUE 635 Curriculum Projects in Music Education.** One to three hours.
Prerequisites: Master’s degree.
The design, proposal, implementation, evaluation, and reporting of a curriculum project or an improved instructional procedure in music. Independent study.

**MUE 641 Advanced Research in Music Education.** Three hours.
Prerequisites: MUE 540; graduate standing
The design, implementation and reporting of research studies that illustrate a variety of methodological and statistical plans for research in music education.

**MUE 650 Advanced Studies in Teaching Music: Classroom Management Using Behavioral Modification.** Three hours.
This course explores applied research methods in classroom management and psychology through examination of selected research studies and behavioral projects.

**MUE 690 Advanced Seminar Music Education.** One to three hours.
Prerequisites: Completion of MUE 529 and post-master’s standing
An intensive reading course, focusing on relevant historical and contemporary published refereed research articles.

**MUE 698 Non-thesis Research.** Three hours.

**MUE 699 Dissertation Research.** Variable credit. Three hour minimum.
11.1 GRADUATE STUDY IN COLLEGE OF ENGINEERING

Graduate work in the College of Engineering is administered jointly by the Graduate School, the College of Engineering, and various administrative subdivisions of the College of Engineering.

The Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (the national accrediting agency for engineering curricula) has examined and accredited all of the professional engineering undergraduate curricula. The undergraduate program in computer science is accredited by the Computer Science Accreditation Commission of the Computing Sciences Accreditation Board, a specialized accrediting body recognized by the Council on Postsecondary Accreditation and the U.S. Department of Education.

Graduate degrees.
The College of Engineering offers the following graduate degrees:

**Master of Science** in aerospace engineering, chemical engineering, civil engineering, computer science, electrical engineering, engineering (environmental engineering), engineering science and mechanics, mechanical engineering, and metallurgical engineering

**Doctor of Philosophy** in the fields of aerospace engineering and mechanics, chemical engineering, civil engineering, computer science, electrical engineering, mechanical engineering, and materials/metallurgical engineering (the PhD in materials/metallurgical engineering is offered jointly with The University of Alabama at Birmingham)

Joint interdisciplinary PhD program in materials science.
A PhD degree in the field of materials science is also offered, in collaboration with The University of Alabama at Birmingham and The University of Alabama in Huntsville. Full details of the program and its admission requirements may be found in the [Interdisciplinary Programs](#) section of the Graduate School Catalog.

Requirements for the Graduate School ([Admission Criteria](#) and [Degree Requirements](#)) and the College of Engineering ([General Admission](#), [MS Degree](#) and [PhD Degree](#)) are detailed in sections of this catalog. Additional requirements are outlined in the individual department descriptions in this catalog.
11.2 ADMISSION REQUIREMENTS

Applicants for graduate work in engineering must apply for admission to the Graduate School of the University. Regular admission to graduate study may be granted to applicants who

- have earned baccalaureate degrees from institutions with programs accredited by the Accreditation Board for Engineering and Technology (ABET) or, for applicants for computer science programs, programs accredited by ABET or the Computing Sciences Accreditation Board (CSAB)
- have overall grade point averages of at least 3.0 on a 4.0 scale, or at least 3.0 for the last 60 hours completed

Each applicant is required to submit a statement of purpose as part of the application packet; there are no exceptions.

All students, except University Scholars students, who are applying to engineering is required to submit a GRE score.

Other appropriate requirements may be established by the individual engineering departments.

Regular admission may also be granted to applicants who are not graduates of ABET- or CSAB-accredited programs and who have Graduate Record Examination general test scores of 1000 or higher, as specified by the department of interest. Each applicant should have the equivalent of a 3.0 or higher grade point average (as in requirements listed above). Other appropriate requirements may be established by the individual engineering departments.

International Admission. International applicants for engineering graduate programs must satisfy the above requirements and must also have TOEFL scores of at least 550 or IELTS score of at least 6.5. The student's proposed plan of study shall include a schedule for removing any undergraduate course deficiencies.

Conditional Admission. Conditional admission may be granted to applicants who

- have earned baccalaureate degrees from institutions with programs accredited by the Accreditation Board for Engineering and Technology (ABET) or, for applicants for computer science programs, institutions accredited by ABET or the Computing Sciences Accreditation Board (CSAB)
- have overall grade point averages of at least 2.5 on a 4.0 scale

Other appropriate requirements may be established by the individual engineering departments.

Conditional admission may be granted to applicants who are not graduates of ABET- or CSAB-accredited programs and who have Graduate Record Examination general test scores of 1000 or higher, as specified by the department of interest. Each applicant should have the equivalent of a 2.5 or higher grade point average (as in requirements listed above). Other appropriate requirements may be established by the individual engineering departments.

A student admitted conditionally is required to maintain a "B" average for the first 12 semester hours of graduate coursework and to remove any conditions imposed for admission in order to continue graduate study.

Applicants with GPAs of less than 2.5 (out of a possible 4.0) may be considered for admission to the Graduate School only after demonstrating the ability to pursue advanced work successfully.
See the **Admission Criteria** section of this catalog for additional information.

Advisement and Committees. After admission to graduate study by the dean of the Graduate School, the student will be referred to the head of the appropriate department for assignment to a temporary advisor. The chairman and other members of the graduate student's supervisory committee are usually appointed during the first term of enrollment. The examining committee (the membership of which is normally the same as that of the supervisory committee) is appointed approximately one semester before the student expects to graduate.
11.3 MASTER OF SCIENCE DEGREES

Master of science degrees with appropriate designations are conferred on those students who satisfy the requirements of (a) the programs or departments in which they are enrolled, (b) the College of Engineering, and (c) the Graduate School as outlined earlier in the Degree Requirements section of this catalog. Any requirements established by the individual departments are outlined in the departmental information that follows.

Master of Science Degree Requirements
Minimum requirements for the master's degree in all programs are 24 semester hours of acceptable coursework under Plan I (plus 6 thesis hours) or 30 hours under Plan II. Specific course requirements (in addition to those established by the Graduate School) are as follows:

- The greater of 12 hours or 25% of the required course work for a master's degree may be transferred, subject to the approval of the appropriate faculty and final approval by the Graduate School. Average grade must be at least "B". The Request for Transfer of Graduate Credit is available at the website of the Graduate School.
- Engineering courses numbered 400 to 499 (offered primarily for senior undergraduates) may be taken by master's students (not doctoral) for graduate credit with prior approval of the student's supervisory committee and prior approval of the Graduate School requested on the Approval of 400-Level Course for Master's Credit form. A maximum of 6 semester hours of 400-level course credit may be accepted for a master's degree. To receive graduate credit for such courses, a minimum grade of "B" must be made in courses in the student's major field of study, and a minimum grade of "C" in courses outside the major field. Courses numbered 500 to 599 are offered primarily for master's students. Courses numbered 600 to 699 are offered primarily for students beyond the master's level.
- Students will be expected to have received credit for MATH 238 Applied Differential Equations prior to admission, or to complete the course with a passing grade after admission (no graduate credit will be awarded), unless they are enrolled in the computer science program.
- All courses are selected by the student with the approval of the student's supervisory committee. If there are deficiencies in undergraduate subjects, the student's supervisory committee may require additional coursework to correct them.
- Under no circumstances will graduate credit be given for courses numbered below 400.
- Under Plan I, an approved thesis must be completed; a minimum of 6 semester hours of credit in 599 Thesis Research is required for Plan I students, in addition to the 24 hours of coursework.
- Under both Plan I and Plan II, students must pass a final comprehensive examination on the content of the degree program. Information about the comprehensive examination is detailed in the Degree Requirements section of this catalog.
- The Admission to Candidacy for the Master's Degree form may be filed with the Graduate School after 12 semesters hours of graduate credit have been completed. It must be approved by the time of registration for the semester in which requirements for the degree are completed. Approval will depend on (a) the quality of the applicant's graduate work prior to the time the application is made (see Degree Requirements); (b) the removal of any special conditions; and (c) the certification of the major department or school that the student is well qualified to continue work toward a degree.

MSE (Environmental Engineering) Degree Requirements
The interdisciplinary master of science in engineering program in environmental engineering is administered by the Department of Civil and Environmental Engineering; inquiries should be directed to the director of the Environmental Engineering Program, Box 870205, Tuscaloosa, AL 35487-0205. The program is open to persons with baccalaureate degrees who have completed at least one year's work in chemistry, mathematics through differential
equations, and an engineering mechanics sequence through fluid mechanics. These prerequisites and others may be satisfied by completing appropriate coursework for non graduate credit.

The versatile MSE (environmental engineering) program uses environmental engineering courses offered by the College of Engineering and appropriate courses in biology, chemistry, geology, and microbiology. A list of courses approved for inclusion in the environmental engineering major is available upon request. The flexibility of the degree requirements permits a student to follow a course of study designed to suit individual interests and needs. Degree requirements are as follows:

- For Plan I students, 24 semester hours of approved environmental coursework and a minimum of 6 additional semester hours of credit in CE 599 Thesis Research is required, along with an approved completed thesis. For Plan II students, 30 semester hours of approved environmental coursework is required. It is expected that master's students will pursue the Plan I (thesis) option. The Plan II (non-thesis) option may be pursued only with approval of the faculty of the department. Students wishing to pursue the Plan II option must formally petition the department faculty to be considered for approval and must present substantial reasons for seeking the variance.
- No more than 6 hours at the 400-level may be applied to this program, and as noted on the Approval of 400-Level Course for Master’s Credit form, approval must be obtained from the department and Graduate School before a 400-level course is taken for master's credit.
- One course in air pollution and one course in water pollution are required.
11.4 DOCTOR OF PHILOSOPHY DEGREE

Doctor of Philosophy students in each College of Engineering department with a PhD program must meet minimum course requirements and all other requirements described in the Doctoral Degrees and Degree Requirements section of this catalog.

Plan of Study
Requirements for the Graduate School, include but are not limited to, submission of a completed PhD Plan of Study (available on the Graduate School website) to the Graduate School. Early in the graduate program, students must meet with their program adviser to select courses, discuss when and by which method the doctoral residency requirement will be completed, discuss research interests, and so forth. All doctoral students must have a completed PhD Plan of Study approved by the Graduate School no later than the semester during which the student will complete 30 semester hours of UA and/or transfer credit toward the doctoral degree. Otherwise, a "hold" may be placed on future registration.

An amended Plan of Study (if needed) must be submitted to the Graduate School when the student submits the form for Admission to Candidacy for Doctoral Degree.

Admission to Candidacy
A department-approved Admission to Candidacy for the Doctoral Degree is submitted to the Graduate School as soon as possible after passing the comprehensive (preliminary) examination. See the online Graduate Catalog (Sec. 4.11.3) for details on Plan of Study, Admission to Candidacy, and all other degree requirements.

400-level Credit
Under no circumstances will graduate credit be given for courses numbered below 400. Only the 400-level credit (6 hours maximum) that was accepted for a master's program may be accepted for a doctoral degree program.

Research Skill/Language Requirements
Each college or department offering the PhD degree may set its own requirements for the language/research Skill. This policy reaffirms the importance of research skills and foreign languages in the highest academic degree granted by American universities, but it also recognizes that the departments offering the degrees are in the best position to determine the number and nature of such requirements in the interests of their students. For further information about PhD foreign language/research skill requirements, students may contact their departments or the Graduate School Degree Requirements section of this catalog.

For additional information about all requirements for the PhD degree, see Admission Criteria and Degree Requirements in earlier sections of this catalog. Students need to review requirements outlined in individual department descriptions in this catalog and visit the College of Engineering website.
Graduate students in the College of Engineering may choose to pursue their studies under a cooperative plan of education. The program is necessarily flexible, so that the study-work experience schedule will meet the needs of individual students. The availability of the cooperative plan will be dependent on the employment being approved by the student's graduate committee.

A student in the Cooperative Education Program should be able to complete all requirements for the MS degree in two years. The schedule for PhD candidates is arranged, in cooperation with the participating industry, to fit the needs of the individual student.
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11.6.1 GENERAL ENGINEERING STUDIES (GES)

Graduate courses are offered on a regular basis in some departments, as indicated in the course listings. However, all graduate courses are taught only upon sufficient demand. In the following course listing, each description contains a set of parentheses immediately preceding the semester hours. The first number within the parentheses indicates the number of contact hours per week in lecture, recitation, or seminar. The second number indicates the number of contact hours per week in laboratory.

The College of Engineering requires that a grade of "C" or better be earned in all prerequisite courses.

Additional information is in the Admission Criteria section and the Degree Requirements section of this catalog.

Course Descriptions

GES courses are interdisciplinary and may be taken to meet individual program requirements.

GES 500 Engineering Statistics. (3-0) Three hours. (Mechanical Engineering.)
Prerequisite: MATH 126. Not open to students who have earned credit for GES 255 or GES 400; not available for MSIE or MSCS degree credit.
Probability and basic statistical concepts. Discrete and continuous distributions; the central limit theorem; sampling distributions; point and interval estimation; hypothesis testing; regression and correlation analysis; analysis of variance.

GES 501 Operations Research. (3-0) Three hours. (Civil, Construction, and Environmental Engineering.)
Prerequisite: MATH 126.
Corequisite: GES 255, GES 400, or GES 500.
Model construction, linear programming, network models, dynamic models, stochastic models, queueing theory, and decision theory.

GES 518 Engineering Management. (3-0) Three hours. (Civil, Construction, and Environmental Engineering.)
Prerequisite: Graduate standing.
An introduction to management principles and the management functions of planning, organizing, motivating, and controlling. Management of research, design, manufacturing, and quality will be studied.

GES 522 Quality Engineering. (3-0) Three hours. (Mechanical Engineering.) Prerequisite: GES 257 or GES 400, or GES 500 or consent of instructor.
Introduction to Taguchi methods, including loss function, orthogonal arrays, and parameter design experiments. Role of Taguchi methods in quality function deployment (QFD) process.

GES 526 Design and Analysis of Experiments. (3-0) Three hours. Same as ME 526. (Mechanical Engineering.)
Prerequisite: GES 257, GES 400, or GES 500. Not open to students who have earned credit for ME 426.
Design of experiments and the application of analysis of variance, regression analysis, and related statistical methods.

GES 551 Matrix and Vector Analysis. (3-0) Three hours. (Aerospace Engineering/ Mechanics.) Prerequisite: MATH 253 or permission of the instructor.
This course provides a graduate level overview of linear algebra and vector analysis. Topics
covered include: linear simultaneous equations, eigenvalues and eigenvectors, matrix functions, computer techniques, and transformations, vector calculus, the Laplacian, and integral theorems such as the theorems of Green and Stokes.

**GES 554 Partial Differential Equations.** (3-0) Three hours. (Aerospace Engineering/Mechanics.)
This course examines the solution of partial differential equations by focusing on three specific equations: (1) the heat equation, (2) the wave equation, and (3) Laplace’s equation. Topics covered include: Fourier transforms, Sturm-Liouville problems, classification of partial differential equations, Bessel functions, and numerical methods for solving partial differential equations.

**GES 575 Stochastic Processes.** (3-0) Three hours. Same as ECE 575. (Electrical and Computer Engineering.)
Prerequisite: GES 500.
Engineering applications of probability theory; problems on sequences of random variables, convergence, stochastic processes, stationarity, ergodicity, correlation function, spectral densities, linear systems with random inputs, design of filters and predictors, Markov processes.

**GES 585 Genetic Algorithms.** (3-0) Three hours.
Prerequisite: CS 110 or CS 114 and graduate standing.
Theory and application of genetic algorithms. Computer implementation and current applications in parameter and combinatorial optimization and optimal control genetics-based machine learning systems. Focus on both fundamental theory and modern applications.

**GES 658 Applied Numerical Methods.** (3-0) Three hours. (Aerospace Engineering/Mechanics.)
Prerequisites: GES 451 and MATH 238.
Condensed coverage of numerical methods essential in engineering: interpolation, integration, root calculation, matrix algebra, eigenvalue problems, matrix differential equations, two-point boundary value problems, least square approximation, Fast Fourier Transforms, and optimization methods. Emphasis is on applications with extensive FORTRAN programming.

**GES 695:696 Seminar.** (1-0) One hour.
The department offers programs leading to the degrees of master of science in aerospace engineering, master of science in engineering science and mechanics, and the doctor of philosophy degree in aerospace engineering and mechanics.

Research
A vigorous program of research is conducted by the faculty and students. The department houses excellent laboratory facilities and advanced computer facilities, including wind tunnels, a water tunnel, extensive servo-hydraulic materials and structural testing equipment, and engineering workstations.

Major research laboratories include the Aircraft Structures Laboratory, the Compressible Flow Laboratory, the Hypersonic Research Laboratory, the Impact and Penetration Mechanics Laboratory, the Advanced Materials Processing Laboratory, the Luminescent Imaging Laboratory, MEMS Fabrication Facility, Computational Mechanics Laboratory, Laser Doppler Velocimetry Laboratory, the IC Engine Laboratory, the Supersonic Wind Tunnel Laboratory, the Subsonic Wind Tunnel, and the Water Tunnel Laboratory.

Some current research projects include theoretical and experimental studies in a variety of areas, including aerodynamics, computational fluid mechanics and heat transfer, buckling of thin-walled shell structures, fracture mechanics, multiaxial fatigue of spot welds and automotive structures, low-cycle fatigue, high-strain rate flow studies, penetration mechanics, improved finite-element methods for thermal and structural analysis, computer simulation of aircraft and missile performance, dynamic response of rapid transit vehicles, solid rockets, flight dynamics, aircraft reliability, aerospace dynamics and control, aeroelasticity, aeroacoustics of missiles and space launch vehicles, condition monitoring in electro-mechanical systems and composites materials.

Graduate research assistantships are available for many of these research projects.

Admission Requirements
Admission requirements are outline in the Admission Criteria section of this catalog.

Degree Requirements
A list of current degree requirements and additional information can be found on the Department of Aerospace Engineering and Mechanics website. The following departmental requirements are in addition to those specified by the Graduate School (Degree Requirements) and the College of Engineering (MS Degree & PhD Degree requirements) detailed in earlier sections of this catalog.

MS in Aerospace Engineering
At least 18 hours of AEM-designated courses are required, including the following core courses:

- GES 554 Partial Differential Equations and one other course from a list of acceptable mathematics and engineering analysis offering, GES 551 Matrix and Vector Analysis, AEM 585 Genetic Algorithms, or AEM 587 Neural Networks (Mathematics)
- AEM 500 Intermediate Fluid Mechanics (Aerodynamics)
- AEM 635 Finite Element Method (Structures)
- AEM 668 Advanced Dynamics of Flight (Flight Structures)

A “B” average in the core courses is a departmental requirement for graduation. Additionally, one of the following areas is chosen as a field of specialization: (a) flight dynamics, simulation and controls, (b) flight vehicle structures and materials, or (c) aerodynamics and
propulsion, and a depth of study (two additional courses) are required in one of the areas above.

**MS in Engineering Science and Mechanics**
At least 18 hours of AEM-designated courses are required, including the following core courses:

- **GES 554** Partial Differential Equations and one other course from a list of acceptable mathematics and engineering analysis offering, **GES 551** Matrix and Vector Analysis, **AEM 585** Genetic Algorithms, or **AEM 587** Neural Networks (Mathematics)
- **AEM 500** Intermediate Fluid Mechanics (Aerodynamics)
- **AEM 637** Theory of Elasticity (Solid Mechanics)
- **AEM 562** Intermediate Dynamics (Dynamics)

A “B” average in the core courses is a departmental requirement for graduation. Additionally, one of the following areas is chosen as a field of specialization: (a) solid mechanics, (b) fluid mechanics, or (c) dynamics and a depth of study (two additional courses) are required in one of the areas above.

**Doctor of Philosophy in Aerospace Engineering and Mechanics**
The PhD is primarily a research degree. Courses are to be selected in consultation with the student's supervisory committee. The following core courses are required:

- **GES 554** Partial Differential Equations and one course selected from a list of mathematics and engineering analysis offering, **AEM 585** Genetic Algorithms, or **AEM 587** Neural Networks (Mathematics)
- **AEM 500** Intermediate Fluid Mechanics (Aerodynamics)
- **AEM 637** Theory of Elasticity (Solid Mechanics)
- **AEM 562** Intermediate Dynamics (Dynamics)

A “B” average in the core courses is a departmental requirement for graduation. Additionally, one of the following areas is chosen as a field of specialization: (a) solid mechanics, (b) fluid mechanics, or (c) dynamics.

**Course Descriptions (AEM)**

**AEM 500 Intermediate Fluid Mechanics.** (3-0) Three hours.
Prerequisites: MATH 238, ME 215, and AEM 311.
Development and use of the integral and differential forms of the equations of continuity, momentum, and energy with ideal fluids and compressible fluids. Advanced topics in fluid mechanics, including potential flow, boundary layer flow, compressible flow, and open channel flow.

**AEM 502 V/STOL Aerodynamics.** (3-0) Three hours.
Theory and design techniques applicable to hovering and slow-flying vehicles.

**AEM 503 Intermediate Gas Dynamics.** (3-0) Three hours. Same as ME 503.
Prerequisites: ME 215 and AEM 311.
Basic equations and concepts of compressible flow; shock and expansion waves; and development of the generalized one-dimensional equations and solution of these equations for various types of flow, using computer software.

**AEM 513 High-Speed Aerodynamics.** (3-0) Three hours.
Fundamentals of high-speed aerodynamics theory along with basic high-speed vehicle design.

**AEM 516 Helicopter Theory.** (3-0) Three hours.
Critical examination of the propulsive airscrew, including induced velocity relations, flow patterns, and similarity. Practical applications approached through existing theory and practice.
**AEM 523 Principles of Simulation.** (3-0) Three hours.  
Corequisite: AEM 368, AEM 566, or AEM 668.  
An overview of man-in-the-loop, real-time simulation. Includes survey of modeling, digital image generation, projection systems, principles of optics, vibration and motion cueing, and control loading. Issues of computer architecture and system integration and of fidelity and latency are discussed. The simulator in the Flight Dynamics Laboratory is used for illustration.

**AEM 525 Spacecraft Attitude Dynamics and Control.** (3-0) Three hours.  
Prerequisite: AEM 368, AEM 372/ME 372, or ECE 475.  
This course introduces the student to the theory and practice of spacecraft dynamics and control. Topics covered include kinematics and dynamics of angular motion, spacecraft stabilization, attitude control devices, and design of linear and nonlinear spacecraft control systems.

**AEM 528 Space Propulsion.** (3-0) Three hours.  
Prerequisite: AEM 408/ME 308.  
Descriptions and analyses of space and launch vehicle propulsion. Topics covered include advanced schemes such as nuclear, solar, and laser propulsion; power cycles; and tether systems.

**AEM 546 Intermediate Solid Mechanics.** (3-0) Three hours.  
Prerequisites: MATH 238 and AEM 250.  
Two-dimensional theory of elasticity; exact and approximate solutions of bending, torsion, and buckling for bars; open sections and curved beams; stresses in axisymmetric members; and finite-element and energy methods.

**AEM 552 Composite Materials.** (3-0) Three hours.  
Prerequisites: AEM 250 and one other course in structures.  
Mechanisms and influence of heterogeneity/anisotropy on thermomechanical behavior. The behavior, manufacturing, and test methods of continuous fiber reinforced polymeric composites are emphasized.

**AEM 554 Engineering Reliability.** (3-0) Three hours.  
Prerequisite: AEM 250.  
Fundamental concepts and applications of probabilistic approach to engineering design.

**AEM 556 Strengthening Mechanisms in Metallic Materials.** (3-0) Three hours. Same as MTE 556.  
Prerequisite: AEM 455.  
Topics include elementary elasticity, plasticity, and dislocation theory; strengthening by dislocation substructure, and solid solution strengthening; precipitation and dispersion strengthening; fiber reinforcement; martensitic strengthening; grain-size strengthening; order hardening; dual phase microstructures, etc.

**AEM 562 Intermediate Dynamics.** (3-0) Three hours.  
Prerequisites: MATH 238 and AEM 264.  
Dynamics of systems in moving coordinate frames; Lagrangian formulation and Hamilton 's principle; stability and perturbation concepts for rigid body motion; motion of systems of rigid bodies in three dimensions.

**AEM 566 Dynamics of Flight.** (3-0) Three hours. Prerequisites: AEM 368 and AEM 249.  
Introduction to the dynamics of flight vehicles; equations for static and dynamic equilibrium; criteria for stability, controllability, and maneuverability.

**AEM 567 Fundamentals of Orbital Mechanics.** (3-0) Three hours.  
Fundamentals of astrodynamics and orbital mechanics.

**AEM 570 Theory of Vibrations.** (3-0) Three hours. Same as ME 570.  
Prerequisites: MATH 238 and AEM 264.
Vibrations of multiple degree of freedom and elastic continuous systems; application of Hamilton’s principle; Lagrange’s equations; finite element method.

**AEM 571 Fundamentals of Acoustics.** (3-0) Three hours. Same as ME 571.
Prerequisites: MATH 238, PH 106, and ECE 320 or ECE 225.
Fundamental physical principles underlying wave propagation and resonance in mechanical systems; introduces applications and provides experience in acoustic and audio measurements and the associated instrumentation.

**AEM 574 Structural Dynamics.** (3-0) Three hours.
Prerequisites: AEM 349, AEM 372, and AEM 451, or by consent of the instructor.
Fundamental methods for predicting the dynamic response of structures.

**AEM 577 Advanced Linear Control.** (3-0) Three hours. Same as ME 577.
Prerequisite: ME 475.
For description, see ME 577.

**AEM 578 Nonlinear Control Systems.** (3-0) Three hours. Same as ECE 674.
Prerequisite: ECE 475.
For description, see ECE 674.

**AEM 579 Introductory Computational Aerodynamics.** (3-0) Three hours.
Fundamentals of computational aerodynamics.

**AEM 585 Genetic Algorithms in Optimization and Machine Learning.** (3-0) Three hours.
Prerequisites: CS 110, or CS 114 and graduate standing.
Theory and application of genetic algorithms. Computer implementation and current applications in parameter and combinatorial optimization and optimal control genetics-based machine learning systems. Focus on both fundamental theory and modern applications.

**AEM 587 Neural Networks.** (3-0) Three hours. Same as ECE 587.
Prerequisite: Graduate standing or CS 114, CS 513.
Theory, implementation, and applications of learning automata and neural networks. Early applications from psychology and biology; current applications in engineering and machine learning, theory of simple networks, and introduction to complex, modern paradigms.

**AEM 591:592 Special Problems.** Variable credit.
Independent investigations of special problems. Credit is based on the amount of work undertaken.

**AEM 594 Special Project.** (2-6) Two to six hours.
Planning, executing, and presenting results of individual project involving a research design, analysis, or similar undertaking.

**AEM 598 Research Not Related to Thesis.** (1-3) One to three hours.

**AEM 599 Master’s Thesis Research.** (1-6) One to six hours.

**AEM 602 Advanced Fluid Mechanics.** (3-0) Three hours.
Prerequisite: AEM 500.
Potential motion in two and three dimensions, conformal mapping, application of Schwartz-Christoffel transformation, virtual mass, and approximate methods.

**AEM 604 Compressible Flow Theory.** (3-0) Three hours.
Prerequisites: AEM 513 or Consent of Instructor
Theory on Three-Dimensional flows, Transonic, Hypersonic flows and Properties of High-Temperature Gases. Transonic and Hypersonic similarity, Frozen, Equilibrium, non-equilibrium flows.

**AEM 610 Aerodynamic Heating.** (3-0) Three hours.
Radiative and convective aerodynamic heating at hypersonic speeds in real, low, and high-density atmospheres; includes resistive, ablative, transpiration, and heat capacity thermal protection techniques.

**AEM 612 Advanced Experimental Aerodynamics.** (3-0) Three hours. Compressible flow, measurement of pressure, Mach number, temperature, density, turbulence, and heat transfer. Some experimental work and illustration of the uses of modern wind tunnel instruments.

**AEM 614 Airfoil and Wing Theory.** (3-0) Three hours. Compressible and incompressible airfoil and wing theory.

**AEM 620 Finite Difference Methods in Fluid Dynamics.** (3-0) Three hours. Prerequisites: MATH 238 and AEM 311. Introduction to basic mathematical concepts and engineering problems associated with numerical modeling of fluid systems. Application of state-of-the-art numerical models to engineering problems.

**AEM 621 Boundary Layer Theory I.** (3-0) Three hours. Same as ME 621. Development of basic boundary layer equations and concepts. Classical incompressible solutions for laminar boundary layer, approximate solutions, and concepts of turbulence.

**AEM 622 Boundary Layer Theory II.** (3-0) Three hours. Prerequisites: Consent of Instructor. Turbulent boundary layer theory; compressible boundary layer theory including shock interaction and heating effects; selected topics.

**AEM 624 Hypersonic Flow Theory.** (3-0) Three hours. Nonlinear treatment of compressible flow, linearized theory, methods for blunt bodies, blast wave theory, numerical methods, and hypersonic wind tunnels.

**AEM 625 Computational Fluid Dynamics.** (3-0) Three hours. Prerequisite: AEM 579. Analyses of aerodynamic flow problems using a digital computer.

**AEM 628 Molecular Aerothermodynamics.** (3-0) Three hours. Understanding gas flows and reactions by developing gas properties from an analysis of molecular interactions.

**AEM 630 Continuum Mechanics.** (3-0) Three hours. Cartesian tensors applied to develop concepts of stress and deformation in continua. Equations of motion resulting from Newton's laws, constitutive laws for particular solids, and boundary value problems in stress analysis and stability.

**AEM 635 Finite-Element Method in Engineering Mechanics.** (3-0) Three hours. Prerequisites: MATH 238 and AEM 250, or permission of the instructor. Finite-element formulations in the areas of solid mechanics, fluid mechanics, and heat conduction; isoparametric elements; assembly process; solution of stiffness equations; and convergence of results.

**AEM 637 Theory of Elasticity.** (3-0) Three hours. Prerequisite: GES 551. Equations of linear elasticity, principal stresses and strains, stress and displacement potentials, energy principles, and numerical methods. Boundary value problems of elasticity.

AEM 639 Aircraft Shell Structures. (3-0) Three hours.
Theoretical analysis of plane and curved web shell structures. Diagonal tension, shear lag, multi-stringer cells, and cutouts. Theoretical analyses are correlated with available experimental evidence to obtain the most effective use of the combined knowledge for practical applications.

AEM 640 Advanced Topics in Continuum Mechanics. (3-0) Three hours.
Prerequisite: AEM 630.
Kinematics of finite deformation; principles of mechanics; principles of frame indifference and objectivity; theory of viscoelasticity; creep and viscoplastic model; and applications in large deformation.

AEM 641 Applied Elasticity. (3-0) Three hours.
Structural analysis as a unified theory based on the principle of virtual displacements. Minimal principles of structural theory and applications to beam columns, sandwich-type beams, and cables; the Rayleigh-Ritz method, Galerkin's method, and trigonometric series solutions.

AEM 642 Structural Behavior of Flight Vehicle Configurations. (3-0) Three hours.
Application of classical and modern numerical methods for predicting the strength, stability, and stiffness of typical aerospace structures. Includes treatment of stiffened plate and shell structures, composite materials, and determination of postbuckled configurations for selected geometries.

AEM 643 Selected Topics in Structural Analysis. (3-0) Three hours.
Selected topics in nonlinear static and dynamic stability of elastic and inelastic structures. Advanced numerical techniques of solution for large systems of differential, integral, and algebraic equations governing the linear and nonlinear behavior of structures.

AEM 644 Engineering Fracture Mechanics. (3-0) Three hours.
Prerequisites: GES 554 and AEM 637.
Linear elastic and elastic-plastic fracture mechanics. Fracture analysis using Griffith's criterion, stress intensity factors, CTOD methods, and the J-Integral.

Prerequisite: AEM 635.
Basic concepts, reduced integration with hourglass control, Navier-Stokes equations, eigenvalue problems, beam and plate elements, time integration, adaptive methods, nonlinear solid mechanics. Familiarization with general purpose codes.

AEM 646 Theory of Plates and Shells. (3-0) Three hours.
Prerequisites: AEM 635 and AEM 637.
Linear and nonlinear theories of plates and shells, analytic solutions of rectangular, circular plates and cylindrical shells and shells of revolution. Application of finite-element method to plates and shells.

AEM 648 Theory of Plasticity. (3-0) Three hours.
Prerequisite: AEM 637.
Fundamentals of inelastic behavior of solids. Basic stress-strain relations for plastic action, yield criteria of metals, plastic instability, and slip-line field theory. Applications to axial, flexural, torsional, and cylindrically symmetric loads.

AEM 649 Fatigue Analysis. (3-0) Three hours.
Presentation of the strain life and fracture mechanics approaches to fatigue analysis. Review of damage parameters, mean stress effects, and cycle counting methods for uniaxial and multiaxial loading.

AEM 653 Variational Methods in Mechanics. (3-0) Three hours.
Prerequisite: GES 554.
Survey of variational principles and methods in mechanics.
**AEM 655 Advanced Composite Materials.** (3-0) Three hours.
Advanced topics in composite materials, including theories of linear orthotropic elasticity, micro-mechanics of composites, nano-composites, and sandwich structures.

**AEM 663 Chaotic Dynamics.** (3-0) Three hours.
Prerequisite: GES 551.
Phase space concepts of nonlinear systems; equilibrium points, limit cycles, and strange attractors; chaotic behavior, Lyapunov exponents, and fractal dimension.

**AEM 665 Advanced Structural Dynamics.** (2-3) Three hours.
Theoretical and experimental methods for the dynamic analysis of structures.

**AEM 667 Astrodynamics II.** (3-0) Three hours.
Transfer orbits, orbital perturbations, multiple body problems, numerical treatments of n-body problems, propulsion, and powered system dynamics.

**AEM 668 Advanced Dynamics of Flight.** (3-0) Three hours.
Analysis of the rigid body dynamic motions of an aircraft; response of an airplane to actuation of controls; introduction to automatic control and stability; introduction to vehicle simulation by digital computer.

**AEM 669 Principles of Guidance and Navigation.** (3-0) Three hours.
Prerequisite: AEM 368 or AEM 566.
Gyroscopes as aircraft attitude indicating devices and as components of inertial navigation systems; Newton's laws applied in various rotating and fixed reference frames used in guidance and navigation; space integrator and Schuler tuning; local geographic coordinate navigation for aircraft; semi-analytic navigation for missile guidance; and analytic (strap down) guidance systems.

**AEM 670 Advanced Vibrations.** (3-0) Three hours.
Prerequisites: MATH 238 and AEM 264.
Vibrations of multiple-degree-of-freedom and elastic continuous systems; application of Hamilton's principle; Lagrange's equations; and finite-element method.

**AEM 672 Intelligent Control.** (3-0) Three hours.
Prerequisite: AEM 577/ECE 577/ME 577.
Mathematical and theoretical foundations for intelligent control methods and their combination with current practices. Real-world applications.

**AEM 674 Introduction to Aeroelasticity.** (3-0) Three hours.
Prerequisites: Permission of the instructor.
Interactions between static/dynamic structural deformation and steady/unsteady aerodynamic loading; control reversal, divergence and flutter; aeroelastic tailoring and aeroservoelasticity.

**AEM 677 Optimal Control.** (3-0) Three hours. Same as ME 677.
Prerequisite: AEM 577.
For description, see ME 677.

**AEM 678 Advanced Topics in Control.** (3-0) Three hours. Same as ME 678.
For description, see ME 678.

**AEM 679 Wave Motion of Continuous Solids.** (3-0) Three hours.
Prerequisites: AEM 470 and AEM 637.
The dynamics of continuous elastic bodies; the properties of wave motion and the motion of an elastic string; propagation of elastic waves in infinite and semi-infinite bodies, cylinders, rods, and beams.

**AEM 681 Experimental Aeroelasticity.** (2-3) Three hours.
Aeroelastic model theory applied to the design and construction of flutter models and dynamic stability models. Testing techniques and model scale aeroelastic experiments.
AEM 685 Engineering Optimization. (3-0) Three hours.  
Prerequisites: GES 551 and MATH 238.  
Basic principles of optimization theory, parameter optimization problems, linear and nonlinear  
programming. Unconstrained and constrained problems treated by simplex, penalty function,  
and generalized reduced gradient methods. Includes several computer projects concerning  
engineering applications.

AEM 691:692 Special Problems (Area). Variable credit.  
Independent investigations of special problems. Credit is based on the amount of work  
undertaken.

AEM 693 Selected Topics. (1-3) One to three hours.  
Topics of current research in dynamics and controls, solid mechanics and structures, or  
thermal/ fluid sciences.

AEM 694 Special Project. (1-6) Two to six hours.  
Planning, executing, and presenting results of an individual project involving a research  
design, analysis, or similar undertaking.

AEM 695 Graduate Seminar. (1-0) One hour.  
Prerequisite: Graduate standing.  
Preparation and presentation of papers and reports on current topics.

AEM 698 Research Not Related to Dissertation. (1-6) One to six hours.

AEM 699 Doctoral Dissertation Research. (3-12) Three to twelve hours.
11.6.3 DEPARTMENT OF CHEMICAL AND BIOLOGICAL ENGINEERING (CHBE)
Department Chair: Professor John Van Zee, Office: 116 Houser

The department offers programs leading to the doctor of philosophy and the master of science in chemical engineering. The graduate program in chemical and biological engineering is designed to provide a balance between engineering science and practical applications. Faculty members work closely with students in coursework and in research.

Admission Requirements
Specific admission requirements for the programs in chemical and biological engineering coincide with those of the Graduate School and the College of Engineering as detailed earlier in this catalog. Admission is also contingent upon approval by the graduate faculty of the Department of Chemical and Biological Engineering. Special opportunities are available for students with undergraduate degrees in fields other than chemical engineering.

Degree Requirements
All graduate students in chemical and biological engineering are required to pass the following core graduate courses: CHE 551 Advanced Thermodynamics I, CHE 552 Transport Phenomena, CHE 553 Computation in Chemical Engineering, and CHE 554 Chemical Reaction Engineering. In addition, each chemical and biological engineering graduate student must take a qualifying examination covering chemical and biological engineering subjects. The qualifying exam is offered yearly and must be taken by students at the earliest possible offering after they have completed the core courses.

Doctor of Philosophy degree requirements. Study in the doctoral program is contingent upon satisfactory performance on the qualifying examination described above. The department requires that students take and pass CHE 695 Seminar during the first part of the doctoral program of study and CHE 696 Seminar in the latter part of the program. These two hours of seminar are in addition to the course hours needed for graduation.
A prospectus examination is required of all candidates for the doctor of philosophy degree. This examination is given after two full years of graduate study have been completed and the supervisory committee deems the student to have adequate preparation. The examination consists of a written proposal describing the student's research activities and an oral presentation and defense of the proposal before the student's supervisory committee. The examination must be completed at least one year prior to the final dissertation defense. A doctoral Plan of Study must be submitted to the Graduate School by the time the student completes 30 hours of UA and/or transfer for the doctorate. The PhD Plan of Study is available at the Graduate School website. A department-approved Admission to Candidacy for the Doctoral Degree is submitted to the Graduate School as soon as possible after passing the comprehensive (preliminary) examination. See the online Graduate Catalog (Sec. 4.11.3) for details on plan of study, admission to candidacy, and all other degree requirements. The College of Engineering MS Degree and PhD Degree requirements are detailed in earlier sections of this catalog.

Course Descriptions

Advanced Undergraduate/Entry Graduate-Level Courses

CHE 512 Polymer Materials Engineering. (3-0) Three hours. Prerequisite: CH 102. Introduction to the manufacture, processing, and applications of organic polymeric materials. This course covers the chemistry of polymer manufacture, the molecular structures of polymers, and the structure-property relationships for thermoplastic and thermosetting polymers.
CHE 524 Air Pollution. (3-0) Three hours. Same as CE 525.
Prerequisite: CE 420 or CHE 304.
Introduction to the sources, characteristics, and effects of air pollution and to air pollution
control technology and design.

CHE 525 Polymer Processing and Rheology. (3-0) Three hours.
Basic and advanced concepts in rheology and polymer processing. Polymer properties and
morphology, rheology of non-Newtonian fluids, polymer processing, and polymer processing
design.

CHE 535 Chemodynamics. (3-0) Three hours.
Prerequisites: CH 102, MATH 253, GES 126 (or CS 226), CHE 304, AEM 311, or permission of
the instructor.
A study of the movement and fate of man-made chemicals in the environment.

CHE 538 Integrated Circuit Fabrication Principles. (3-0) Three hours.
Prerequisite: MATH 238
Study of the processing tools and unit operations used in semiconductor device fabrication.
Topics include semiconductor fundamentals, semiconductor device fabrication processes,
interconnections and contacts, integrated circuit packaging, and chip yields.

CHE 545 Introduction to Biochemical Engineering. (3-0) Three hours.
Prerequisite: CH 231
Study of biological processes, application of chemical engineering skills to areas including
enzyme kinetics, fermentation, cell growth, and metabolic processes.

Graduate Core Courses

CHE 551 Advanced Thermodynamics I. (3-0) Three hours.
Application of thermodynamic principles to chemical and phase equilibria.

CHE 552 Transport Phenomena. (3-0) Three hours.
Development of the analogy between momentum, energy, and mass transport, with
applications.

CHE 553 Computation in Chemical Engineering. (3-0) Three hours.
Chemical-engineering applications of advanced calculus, numerical methods, and digital
computer techniques, with emphasis on expressing physical situations in mathematical
language.

CHE 554 Chemical Reaction Engineering. (3-0) Three hours.
Chemical kinetics theory and experimental techniques. Industrial reactor design by advanced
methods.

Other Graduate Courses

CHE 591:592 Special Problems (Area). One to three hours.
Open to properly qualified graduate students. Advanced work of a research nature. Credit is
based on the amount of work completed.

CHE 595:596 Seminar. (1-0) One hour (each).
Discussion of current advances and research in chemical engineering, presented by graduate
students and other speakers.

CHE 598 Research Not Related to Thesis. One to six hours.

CHE 599 Master's Thesis Research. One to twelve hours. Pass/fail.
Advanced Graduate Courses

**CHE 602 Advanced Fluid Mechanics.** (3-0) Three hours.  
Prerequisite: CHE 552.  

**CHE 603 Advanced Heat Transfer.** (3-0) Three hours.  
Prerequisite: CHE 522.  
Use of the energy balance in heat-transfer equipment design. Transient solution of the energy balance, advanced condenser design, and computer-implemented heat-exchange equipment design.

**CHE 611 Process Dynamics and Control.** (3-0) Three hours.  
Prerequisite: CHE 493 or permission of the instructor.  
Advanced process control design and analysis. Control of distributed-parameter systems and nonlinear processes; self-adapting and self-tuning controllers; optimal control; distributed microprocessor controllers.

**CHE 621 Diffusional Operations.** (3-0) Three hours.  
Prerequisite: CHE 552.  
The latest experimental and theoretical studies in several areas involving diffusion. Includes simultaneous heat and mass transfer and mass transfer with chemical reaction.

**CHE 625 Non-Newtonian Fluid Mechanics.** (3-0) Three hours.  
Prerequisite: CHE 552 or permission of the instructor.  
Advanced study of the mechanics of viscoelastic and nonlinear fluids including polymeric liquids, suspensions, foams, and emulsions. Emphasis on the formulation of appropriate constitutive equations and solution of the equations of change.

**CHE 626 Advanced Stagewise Operations.** (3-0) Three hours.  
Prerequisite: CHE 552.  
An advanced treatment of stagewise operations such as distillation, absorption, and extraction, with emphasis on multicomponent systems.

**CHE 651 Advanced Thermodynamics II.** (3-0) Three hours.  
Prerequisite: CHE 553.  
Computational techniques and theoretical methods for atomic and molecular modeling of chemical processes. Covers applied quantum and statistical mechanics, Monte Carlo methods, molecular dynamics, and mesoscale simulation methods.

**CHE 691:692 Special Problems (Area).** One to three hours.  
Problems of current research.

**CHE 695:696 Seminar.** (1-0) One hour (each).  
Presentations of dissertation research.

**CHE 698 Research Not Related to Dissertation.** One to six hours.

**CHE 699 Doctoral Dissertation Research.** Three to twelve hours. Pass/fail.
11.6.4 DEPARTMENT OF CIVIL, CONSTRUCTION AND ENVIRONMENTAL ENGINEERING (CCEE)
Head: Professor Kenneth Fridley, Office: 262 H. M. Comer Hall

The department offers programs leading to the master of science in civil engineering, master of science in engineering (environmental engineering), and doctor of philosophy degrees in civil engineering. Research programs in the department include urban environmental quality and water resources; management and safety of transportation systems; infrastructure development, assessment, renewal, and protection; and construction engineering and management. Laboratory facilities are provided for graduate research and instruction in these and other areas.

Admission Requirements

The requirements for admission to the Graduate School are detailed in section 4.4 of this catalog. The Department of Civil, Construction and Environmental Engineering also embraces the requirements of the College of Engineering, summarized as follows:

1. An applicant must have earned a baccalaureate degree from an institution accredited by the Engineering Accreditation Council (EAC) of ABET, inc. and have a grade point average of at least 3.0 on a 4.0 scale, or at least 3.0 for the last 60 hours completed.
2. Applicants who are not graduates of EAC/ABET-accredited programs must have Graduate Record Examination general test scores of 1000 or higher and grade point averages of 3.0 or higher on a 4.0 scale.

Degree Requirements

Master of Science Degree Requirements
The basic requirements for both the master of science in civil engineering and master of science in engineering (environmental engineering) are identical. A total of 30 hours is required for a master’s degree, consisting of at least 24 regular course hours and 6 or more thesis research hours for Plan I students. The student’s advisor and supervisory committee work with the student to define an appropriate plan of study that meets all degree requirements, including any prerequisite or preparatory work and a core set of courses as required and specified by each specialty area. Students are required to pass a comprehensive exam or thesis defense administered by the student’s supervisory committee.

See the Master’s Degrees Graduate School requirement section of this catalog for additional information.

Doctor of Philosophy Degree Requirements
A total of 72 hours is required for the degree, including a minimum of 48 hours of coursework beyond the baccalaureate and 24 hours of dissertation research. A maximum of 24 hours of approved transfer credit is allowed, with approval of the Graduate School on the form for Request for Transfer of Graduate Credit.

The student’s advisor and supervisory committee will work with the student to define an appropriate plan of study that meets all degree requirements, including any prerequisite or preparatory work and a core set of courses as required and specified by each specialty area. After approval by the department the PhD Plan of Study is submitted to the Graduate School for final approval. All doctoral students must have a completed Plan of Study approved by the Graduate School no later than the semester during which the student will complete 30 semester hours of UA and/or transfer credit for the doctoral degree. Otherwise, a "hold" may be placed on future registration.
Students are required to pass a preliminary examination that includes both written and oral components, a proposal defense, and a final dissertation defense administered by the student's supervisory committee.

After passing the comprehensive (preliminary) examination, the student should complete and submit an Admission to Candidacy for the Doctoral Degree to the department for approval. A department-approved candidacy form will be forwarded to the Graduate School for final approval.

For additional information about the Graduate School's general requirements for advanced degrees see the online Graduate Catalog (Sec. 4.11.3) for details.

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**Course Descriptions**

Master's students may, with permission of the department and approval by the Graduate School, receive credit for six hours of 400-level credit. No 400-level courses can be approved for application to a PhD degree, other than the maximum of 6 hours already completed as part of a master's degree. A master's student may, with approval of a petition, meet prerequisites with a combination of related coursework and experience.

**CE 511 Advanced Rock Mechanics.** (3-0) Three hours.
Prerequisite: AEM 250.
Advanced levels of theories of rock failure, ground movement, stability analysis, and the design of underground openings; rock testing methods.

**CE 515 Advanced Engineering Economics.** (3-0) Three hours.
Prerequisite: IE 203 or CE 366; and GES 255 or GES 400 or 500
Not open to students with credit for CE 415. Capital budgeting decision making under risk and uncertainty, utility theory, cost estimation, and design of financial control through management simulation.

**CE 516 Advanced Information Systems Design.** (3-0) Three hours.
Prerequisite: CE 414 or equivalent.
Not open to students with credit for CE 416. Current concepts in information systems architecture and applications, including decision support systems and expert systems. Emphasis placed on expanded use of systems design methodology.

**CE 517 Advanced Project Management.** (3-0) Three hours.
Prerequisites: IE 203 or CE 366; and GES 255
Not open to students who have credit for CE 417. This is an engineering management course designed to introduce students to the functions of project engineers and managers. It details the processes of planning and controlling project scope, time, and cost.

**CE 518 Engineering Management.** (3-0) Three hours.
Prerequisite: CE 366
Not open to students who have credit for CE 418. An introduction to management principles, and the management functions of planning, organizing, motivating, and controlling. Management of engineers in research, design, manufacturing/construction, and quality will be studied.

**CE 522 Solid and Hazardous Waste Management.** (3-0) Three hours.
Prerequisite: CE 320 or B.S. degree in a compatible field.
Engineering design and regulatory requirements for the collection, storage, recycling, treatment, and disposal of solid wastes.

**CE 523 Effects and Fates of Hazardous Chemicals Released to the Environment.** (3-0) Three Hours.
Prerequisites: CE 520; CE 378; & CE 425 or permission of instructor.
Chemical fate and transport in the environment. Frequency and magnitude of accidents involving hazardous material. Effects of these releases on the community.
CE 525 **Air Pollution.** (3-0) Three hours.
Prerequisite: AEM 311 or CHE 304.
Introduction to the source, characteristics, and effects of air pollution and to air pollution control technology and design.

CE 526 **Physical/Chemical Processes in Water and Wastewater Treatment.** (3-0) Three hours.
Prerequisites: Graduate standing and course in differential equations; or permission of the instructor.
Discussion of fundamentals of physical/chemical processes, as they relate to environmental quality and water and wastewater treatment. Reactor principle, chemical processes, and particle removal process will be discussed from fundamental theory.

CE 527 **Storm Water Management.** (3-0) Three hours.
Prerequisites: CE 378 and CE 475 or permission of instructor.
Quality and quantity of urban storm water. Receiving water problems and sources of pollutants. Runoff quality and quantity characteristics. Selection and design of controls; regulations.

CE 529 **Environmental Systems Analysis** (3-0) Three hours.
Prerequisites: CE 320 and CE 424.
Advanced examination of tertiary, physical, and chemical unit operations used in water and wastewater systems.

CE 532 **Advanced Structural Analysis.** (3-0) Three hours.
Prerequisite: CE 331.
Introduction to the matrix-displacement method of analysis for framed structures, including computer implementation of analysis. An introduction to finite-element analysis is also included.

CE 534 **Advanced Structural Mechanics.** (3-0) Three hours.
Prerequisite: CE 331 or graduate standing
Introduction to advances structural mechanics topics, including elementary elasticity, elementary beam theories, beams on elastic foundations, energy methods, buckling and free vibration of beams, and elementary thin-plate theory.

CE 536 **Wood Structural Design.** (3-0) Three hours.
Prerequisite: CE 331.
Modern timber engineering: design of beams, columns, trusses, and floor systems.

CE 537 **Reinforced Concrete Structures II.** (3-0) Three hours.
Prerequisite: CE 433.
Design of reinforced concrete building components including two-way slabs, slender columns, prestressed beams, slap-on-grade, and retaining walls.

CE 538 **Structural Steel Design II.** (3-0) Three hours.
Prerequisite: CE 434.
Basic and elementary design procedures for steel structures such as plate girders, mill buildings, multistory buildings, highway bridges, and light-gauge steel structures.

CE 539 **Design of Masonry Structures.** (3-0) Three hours.
Prerequisite: CE 539
Design of un-reinforced and reinforced masonry walls, columns, pilasters, beams and lintels.

CE 542 **Waste Containment Facilities.** (3-0) Three hours.
Prerequisite: CE 340 or permission of instructor.
Introduction to the fundamentals of soil behavior as they relate to environmental engineering. Topics include soil behavior, soil compaction, conduction phenomena, geosynthetics, and aspects of landfill design.
CE 544 Foundation Engineering. (3-0) Three hours.
Prerequisite: CE 340.
Analysis and design of soil foundation systems.

CE 551 Geometric Design of Roadways. (3-0) Three hours.
Prerequisite: CE 350.
Application of the principles of geometric design: alignment, vertical control, drainage, traffic control, interchanges, and intersections. Design projects will be prepared to illustrate standard techniques.

CE 552 Traffic Safety and Security. (3-0) Three hours.
Prerequisite: CE 350.
Introduction to transportation safety and security issues. Site/situation identification techniques, risk assessment, countermeasure analysis, cost effectiveness, construction, and evaluation.

CE 553 Intelligent Transportation Systems--ITS. (3-0) Three hours.
Prerequisite: CE 350.
Introduction to intelligent transportation systems including traffic management, institutional and planning issues; system architecture, and system design/construction/operation.

CE 554 Urban Transportation Planning. (3-0) Three hours.
Prerequisite: CE 350.
An introduction to the planning process, software associated with transportation modeling, and conducting transportation planning and traffic impact studies.

CE 556 Transportation Systems Analysis. (3-0) Three hours.
Prerequisite: CE 350 or Graduate Status.
Basic concepts and tools of systems analysis, including those from microeconomics, optimization, project evaluation and decision making, are integrated into the context of transportation planning and management.

CE 560 Front End Planning. (3-0) Three hours.
Prerequisite: CE 366
Principles and applications for effective early planning of capital facilities, including: finance, economics decision making, risk management, team alignment, and front end planning processes and tools.

CE 563 Construction Cost Estimating. (3-0) Three hours.
Prerequisite: CE 366
Addresses the estimating and cost control function from conceptual planning through project execution. Topics include productivity analysis, organization of estimates, cost forecasting, estimating tolls and techniques, contingency planning and relationship to contract types and project execution strategies.

CE 557 Pavement Design and Construction. (3-0) Three hours.
Prerequisite: CE 340.
The thickness design of base, subbase, asphalt, and concrete layers for highway pavements, including both design and construction aspects.

CE 558 Traffic Engineering. (3-0) Three hours.
Prerequisite: CE 350.
Vehicle operating characteristics, traffic flow, geometric design of road and intersections, and methods of traffic control.

CE 559 Pavement Rehabilitation. (3-0) Three hours.
Prerequisite: CE 350.
This course covers two areas concerning care of existing highway asphalt and concrete pavements. Major maintenance includes overlay design, additional drainage, recycling, and slab repair. Routine maintenance includes distress surveys, pothole repair, and crack and joint sealing.
CE 561 Horizontal Construction Methods. (3-0) Three hours.
Prerequisite: CE 366
Introduction to horizontal construction engineering equipment and methods. Design of horizontal construction systems, and construction operation analyses and simulation.

CE 562 Vertical Construction Methods. (3-0) Three hours.
Prerequisite: CE 366
Construction of buildings, including mechanical, electrical plumbing and controls systems, design of temporary structures, and planning and design of lifts.

CE 564 Safety Engineering. (3-0) Three hours.
Prerequisite: GES 255 or equivalent.
Not open to students with credit for CE 464. An exposure to safety engineering and accident prevention including state and federal laws related to general and construction projects. Topics include accident theories, safety regulations, Construction Safety Act, hazards and their control, human behavior and safety, and safety management.

CE 565 Advanced Blasting Engineering. (3-0) Three hours.
Prerequisite: CE 340 or CE 411 or AEM 250.
Behavior of rock under dynamic loads intended to fragment or penetrate; theories of drilling, blasting, and communication; and application of theory.

CE 569 Construction Internship. (3-0) Three hours.
Prerequisite: CE 366, CE464 or Graduate Standing
Practical field experience working with management of construction.

CE 570 Open Channel Flow. (3-0) Three hours.
Prerequisite: CE 378.
Basic concepts of fluid flow, energy and momentum principles, flow resistance in nonuniform sections, channel controls and transitions, and nonuniform flow computations.

CE 573 Statistical Applications in Civil Engineering. (3-0) Three hours.
Prerequisite: MATH 238.
Applications of statistical and probabilistic methodologies for analysis and solution of practical civil engineering problems, including frequency and risk analysis, analyses of experimental data, and systems simulation and optimization.

CE 575 Hydrology. (3-0) Three hours.
Prerequisite: CE 378.
Hydrologic cycle, rainfall-runoff relations, unit hydrograph, statistical hydrology, and hydrologic simulation; includes a class project with application to flood control, water supply, and multipurpose projects.

CE 580 Forensic Engineering. (3-0) Three hours.
Prerequisite: AEM 250
When failures in the built environment occur, whether during design, construction or in-service, a thorough examination of the causes is essential to both the evolution sound engineering practices and to dispute resolution through the legal system. The role of the engineer in this process is examined.

CE 581 Legal Aspects of Engineering and Construction. (3-0) Three hours.
Prerequisites: CE 262 and at least one CE 300-level class.
Legal aspects of engineering and construction contacts and specifications; contract formation, interpretations, rights and duties, and changes; legal liabilities and professional ethics of architects, engineers, and contractors.

CE 582 Advanced Geological Engineering. (3-0) Three hours.
Prerequisite: GEO 101 or permission of instructor.
Engineering properties of rocks and soils, surface and subsurface exploration, ground water, land subsidence, earthquakes, geophysical techniques, and application of geology to civil,
mining, and environmental engineering.

**CE 584 Experimental Design and Field Sampling.** (3-0) Three hours.  
Prerequisites: CE 320 & GES 255 (or equivalent) or permission of instructor  
Experimental design, sensitivity analyses, water sampling and flow monitoring. Receiving  
water chemical reactions. Field investigations.

**CE 585 Construction Site Erosion Control.** (3-0) Three hours.  
Prerequisites CE 378, basic engineering hydrology.  
Nature and magnitude of erosion problems, erosion plan development. Rainfall energy and  
erosion predictions. Sediment transport in urban areas. Channel and slope stability, and  
sedimentation and other controls.

**CE 591:592 Special Problems.** One to three hours.  
Prerequisite: Written permission of the instructor.  
Independent study. Credit is based on the amount of work undertaken.

**CE 598 Research Not Related to Thesis.** Variable credit.

**CE 599 Master's Thesis Research.** One to Twelve hours.

**CE 605 Impacts of Homeland Security on America.** (1-0) One hour.  
Prerequisite: None.  
An interdisciplinary seminar that explores the impacts of homeland security on the economy,  
politics, law, computing infrastructure, transportation, drinking water, the environment, and  
other fields.

**CE 622 Water Quality Engineering.** (3-0) Three hours.  
Prerequisites: MATH 238 and CE 424.  
Introduction to the principles of water-quality engineering and the development and use of  
water-quality models.

**CE 629 Environmental Regulations.** (3-0) Three hours.  
Prerequisite: CE 424.  
Study of environmental laws and the regulations that have resulted from those laws.

**CE 632 Advanced Structural Analysis II.** (2-3) Three hours  
Prerequisite: CE 532.  
Finite-element methods, three-dimensional structures.

**CE 633 Structural Stability.** (3-0) Three hours.  
Prerequisite: CE 331.  
Static buckling of structural elements, frames, and trusses.

**CE 634 Advanced Structural Mechanics.** (3-0) Three hours.  
Prerequisite: CE 331 or graduate standing.  
Introduction to advances structural mechanics topics, including elementary elasticity,  
elementary beam theories, beams on elastic foundations, energy methods, buckling and free  
vibration of beams, and elementary thin-plate theory.

**CE 653 Traffic Planning.** (3-0) Three hours.  
Prerequisite: CE 350.  
The role of transportation and traffic in urban planning; the relationship of traffic facilities to  
land use, zoning, and planning studies.

**CE 655 Sustainable Transportation.** (3-0) Three hours.  
Prerequisite: Instructor Permission.  
Pre-requisite: Instructor permission. Course will define the concept of sustainable  
transportation and examine its applications. It will address the travel behavior, land use and  
policy issues that affect and are affected by the increasing emphasis towards developing more  
sustainable transportation systems.
CE 656 Transportation Demand and Network Modeling. (3-0) Three hours. Prerequisite: CE456/556 or equivalent, or permission from instructor. Co-requisite: CE 573 Statistical Application in Civil Engineering or equivalent, or consent of instructor. Theory and models of individual choice behavior and their applications in travel demand modeling; mathematical models for transportation network problems and their applications in planning and operations of urban highway and transit systems.

CE 691:692 Special Problems (Area). Variable credit. Advanced work in some area of specialization. Credit awarded is based on the amount of work completed.

CE 698 Research Not Related to Dissertation. Variable credit.

CE 699 Doctoral Dissertation Research. Three to twelve hours.
The Department of Computer Science offers interdisciplinary graduate programs leading to the master of science and doctor of philosophy degrees. The programs are for students who are interested in professional careers in computer science. Two master's degree programs are available. The Plan I (thesis) degree is a research-oriented degree, while the Plan II degree is for students who are interested primarily in design.

Research activity in the department includes active investigations in software engineering, algorithms, database management, networks, parallel and distributed computation, programming languages, robotics, and human-computer interaction.

Admission Requirements

In addition to meeting the admission requirements established by the Graduate School (Admission Criteria), students applying for graduate study in the department must also meet the following general requirements: (1) demonstrated competence in programming; (2) completion of the equivalent of the department's undergraduate core computer science curriculum; and (3) demonstration, by an appropriate score on the general test of the Graduate Record Examination, of competence in the discipline of computer science.

Each student must submit scores from the Graduate Record Examination general test. This requirement may be waived for a student who graduated with a GPA of 3.0 or higher on a 4.0 scale from an institution accredited by the CAC Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 – telephone (410) 347-7700. It is strongly recommended that each student submit a score from the GRE Subject Exam in Computer Science, particularly students who wish to be considered for funding opportunities.

Additional details of these requirements may be obtained directly from the department. Applicants who present most but not all of these qualifications may be considered for conditional admission.

Degree Requirements:

Master of Science

Departmental degree requirements for the MS degree, which are in addition to those established by the College and by the Graduate School, are as follows for Plan I and Plan II students:

- Each Plan I candidate must earn a minimum of 24 semester hours of credit for coursework, plus a 6-hour thesis under the direction of a faculty member.
- Each Plan II candidate must earn a minimum of 30 semester hours of credit for coursework, which may include a 3-hour nonthesis project under the direction of a faculty member.
- Unlike the general College of Engineering requirements, graduate credit may not be obtained for courses at the 400-level.

Both plans also have core and depth requirements, which can be found at the website of the Department of Computer Science. Additional information is in the Degree Requirements section of this catalog.
Doctor of Philosophy
The doctor of philosophy degree is regarded as a research degree and is granted on the basis of scholarly proficiency, distinctive achievement in a special field, and the capacity for independent, original investigation. The first two criteria are tested in coursework and a qualifying examination, the last by a dissertation that must present the results of substantial research clearly and effectively. A combination of these accomplishments, rather than the mere accumulation of residency and course credits, is the essential consideration in awarding the PhD degree.

A minimum of 48 semester hours of course credit is required. Graduate credit may not be obtained for courses at the 400-level. Approval of the selection of courses must be obtained from the student's advisor and supervisory committee, and the course of study as a whole must be unified so that all its parts contribute to an organized program of study and research. A PhD Plan of Study (available at the Graduate School website) must be prepared and submitted to the Graduate School not later than the semester in which the student accumulates 30 hours of transfer and/or UA course work.

Students also must complete at least 24 semester hours of dissertation research and have fulfilled residency, passed the comprehensive (preliminary) and other exams. A department-approved Admission to Candidacy for the Doctoral Degree is submitted to the Graduate School as soon as possible after passing the comprehensive (preliminary) examination. See the website for the Department of Computer Science and Graduate Catalog (Sec. 4.11.3) for details on plan of study, admission to candidacy, and all other degree requirements.

All requirements for the PhD must be completed within 7 years (21 fall, spring and summer semesters) of the admission semester. See this catalog's time limits section for details.

Course Descriptions

CS 500 Discrete Mathematics for Computer Science. (3-0) Three hours.
Prerequisite(s): MA 301, and either CS 470 or CS 570.
This course applies techniques of discrete mathematics to computer science problems. Topics include logic, proofs, number theory, graphs, trees, sets, relations, counting, recurrences, generating functions, probability, and expectation.

CS 503 Programming Languages. (3-0) Three hours.
Prerequisite(s): CS 315; and CS 350 or CS 351 or CS 352 or CS 325; and CS 360 or CS 357; and ECE 383. (Not open to students who have earned credit for CS 403.)
This course provides a graduate level presentation of Programming Languages. Formal student of programming language specification, analysis, implementation, and run-time support structures; organization of programming languages with emphasis on language constructs and mechanisms; and study of non-programming paradigms.

CS 507 Software Interface Design. (3-0) Three hours.
Prerequisite(s): CS 315; and CS 350 or CS 351 or CS 352 or CS 325; and CS 360 or CS 357; and ECE 383. (Not open to students who have earned credit for CS 407.)
Concepts of the human-computer interface, emphasizing the software aspects. Dialog styles, form models, user documentation and the evaluation of human-computer software interfaces.

CS 515 Software Design and Development. (3-0) Three hours.
Prerequisite(s): CS 315; and CS 350 or CS 351 or CS 352 or CS 325; and CS 360 or CS 357; and ECE 383. (Not open to students who have earned credit for CS 415.)
This course provides a graduate level presentation of Software Design and Development. Introduction to software engineering; the software crisis, program life-cycle, software systems analysis techniques, theory and practice of design, structured techniques, program testing methodologies, programmer team organization, and program verification and synthesis.

CS 526 Introduction to Operating Systems. (3-0) Three hours.
Prerequisite(s): CS 315; and CS 350 or CS 351 or CS 352 or CS 325; and CS 360 or CS 357; and ECE 383. (Not open to students who have earned credit for CS 426.)

This course provides a graduate level presentation of Introduction to Operating Systems. Study of basic operating system concepts with an emphasis on memory processor, device, and information management.

**CS 528. Computer Security.** (3-0) Three hours.
Prerequisite(s): CS 426. (Not open to students who have earned credit for CS 428.)
An examination of computer security concepts, such as cryptographic tools, user authentication, access control, database security, intrusion detection, malicious software, denial of service, firewalls and intrusion prevention systems, trusted computing and multilevel security, buffer overflow, software security, physical and infrastructure security, human factors, and security auditing.

**CS 534 Compiler Construction.** (3-0) Three hours.
Prerequisite(s): CS 315; and CS 350 or CS 351 or CS 352 or CS 325; and CS 360 or CS 357; and ECE 383. (Not open to students who have earned credit for CS 434.)
This course provides a graduate level presentation of Compiler construction. Syntax and semantics of procedure-oriented languages and translation techniques used in their compilation; includes computer implementation.

**CS 535 Computer Graphics.** (3-0) Three hours.
Prerequisite(s): CS 315; and CS 350 or CS 351 or CS 352 or CS 325; and CS 360 or CS 357; and ECE 383. (Not open to students who have earned credit for CS 435.)
Display memory, generation of points, vectors, etc. Interactive versus passive graphics, analog storage of images on microfilm, etc. Digitizing and digital storage, pattern recognition by features, syntax tables, and random nets. The mathematics of three dimensions, projections, and the hidden-line problem.

**CS 538 Computer Communications and Networks.** (3-0) Three hours.
Prerequisite(s): CS 315; and CS 350 or CS 351 or CS 352 or CS 325; and CS 360 or CS 357; and ECE 383. (Not open to students who have earned credit for CS 438.)
This course provides a graduate level presentation of Computer Communications and Networks. The student of the issues related to Computer communications. Topics include physical topologies, switching, error detection and correction, routing, congestion control, and connection management for global networks (such as the Internet) and local area networks (such as Ethernet). In addition, network programming and applications will be considered.

**CS 557 Database Management Systems.** (3-0) Three hours.
Prerequisite(s): CS 315; and CS 350 or CS 351 or CS 352 or CS 325; and CS 360 or CS 357; and ECE 383. (Not open to students who have earned credit for CS 457.)
This course provides a graduate level presentation of Database Management Systems. Constituent parts of database management (design, creation, and manipulation of databases), client-server, relational, and object-oriented data models.

**CS 560 Introduction to Autonomous Robotics.** (3-0) Three hours.
Prerequisite(s): CS 426. (Not open to students who have earned credit for CS 460.)
Issues involved with the implementation of robot control software including motion, kinematics, simulation testing, sensor incorporation and unmodeled factors.

**CS 567 Computer Systems Architecture.** (3-0) Three hours.
Same as ECE 584. For description, see ECE 584.

**CS 570 Introduction to Computer Algorithms.** (3-0) Three hours.
Prerequisite(s): CS 315; and CS 350 or CS 351 or CS 352 or CS 325; and CS 360 or CS 357; and ECE 383. (Not open to students who have earned credit for CS 470.)
This course provides a graduate level presentation of Introduction to Computer Algorithms. Construction of efficient algorithms for computer implementation.

**CS 575. Formal Language & Machine.** (3-0) Three hours.
Prerequisite(s): CS 315; and CS 350 or CS 351 or CS 352 or CS 325; and CS 360 or CS 357; and ECE 383. (Not open to students who have earned credit for CS 475.)

Regular expressions and finite automata. Context free grammars and pushdown automata. Recursively enumerable languages and turing machine. The Chomsky hierarchy.

**CS 580 Computer Simulations.** (3-0) Three hours.
Prerequisite(s): CS 315; and CS 350 or CS 351 or CS 352 or CS 325; and CS 360 or CS 357; and ECE 383. (Not open to students who have earned credit for CS 480.)
Use of digital computer simulation in the analysis of large-scale systems. Comparison of discrete change simulation language; design of simulation experiments for optimization; validation of simulation models.

**CS 591 Special Topics in Computer Science.** (3-0) Three hours.
Formal courses that cover new and innovative topics in computer science and do not yet have their own course numbers. Specific course titles will be announced.

**CS 592 Independent Study in Computer Science.** Variable credit.
This course requires a written proposal that must be approved by the sponsoring faculty member before registration.

**CS 598 Research Not Related to Thesis.** Variable credit.

**CS 599 Master's Thesis Research.** Variable credit.

**CS 600 Foundations of Software Engineering.** (3-0) Three hours.
Prerequisite: CS 415 or CS 515.
Introduction to formal software development techniques; theoretical foundations of specification, design, and testing; and programming methodologies and software reuse.

**CS 601 Design and Analysis of Computer Algorithms.** (3-0) Three hours.
Prerequisite: CS 470 or CS 570.
A study of algorithm design techniques; analysis of performance of algorithms; and fundamental principles and concepts of algorithm construction, proof, and analysis.

**CS 602 Advanced Formal Languages and Machines.** (3-0) Three hours.
Prerequisite: CS 470 or CS 475 or CS 570.
Regular languages, context-free languages, recursive and recursively enumerable languages, nondeterminism, and undecidability.

**CS 603 Organization of Programming Languages.** (3-0) Three hours.
Prerequisite: CS 403 or CS 503.
Design and implementation of programming languages; syntax and translation; semantic structures and run-time representations; data, operations, control structures, and storage management.

**CS 605 Theory of Artificial Intelligence.** (3-0) Three hours.
Prerequisite: CS 465.
Concepts of artificial intelligence, with emphasis on problem solving, knowledge representation, logic and deduction, and machine learning.

**CS 606 Analysis of Operating Systems.** (3-0) Three hours.
Prerequisite: CS 426 or CS 526.
Design of operating systems; advanced examination of synchronization, deadlock, virtual memory, and security; and parallel and distributed systems.

**CS 607 Software User Interface Design and Analysis.** (3-0) Three hours.
Prerequisite: CS 407 or CS 507.
Concepts of the human-computer interface, emphasizing the software aspects. Dialog styles, form models, user documentation, and the evaluation of human-computer software interfaces.
CS 609 Database Management. (3-0) Three hours.
Prerequisite: CS 457 or CS 557.
Data model theory, comparison of existing database systems, implementation technology, selection, evaluation techniques, integrity, security, authorization and protection, and hardware architecture.

CS 612 Advanced Data Structures. (0-3) Three hours.
Prerequisites: CS 357, and either CS 470 or CS 570
A graduate-level study of data structures. Topics include self-balancing trees binomial and Fibonacci heaps, disjoint sets, graphs and digraphs.

CS 613 Advanced Computer Communication and Networks. (3-0) Three hours.
Prerequisite: CS 438 or CS 538 and either GES 255 or ST 410.
Study of computer networks, including telecommunications and related data transmission techniques. Network philosophy, design, and implementation.

CS 614 Theory and Construction of Compilers. (3-0) Three hours.
Prerequisite: CS 434 or CS 534.
Definition and specification of language syntax and semantics, lexical scans, operational notations, and compilation methods. Compiler writing systems. A formal approach to compiler theory.

CS 618 Wireless, Mobile Network Protocols. (3-0) Three hours.
Prerequisites: CS 438/538 or CS 613 or ECE 406/506 or ECE 502. Other-consent of instructor.
Network protocol design and analysis in wireless and mobile networks. Topics include ad hoc routing, mobility management, TCP over wireless links, quality of service and privacy, energy-efficient design, cross-layer design, and emerging applications.

CS 620 Information Storage and Retrieval. (3-0) Three hours.
Prerequisite: CS 609.
Natural language processing; analysis of textual material by statistical, syntactic, and logical methods; retrieval system models, dictionary construction, query processing, file structures, and content analysis; automatic retrieval systems and question-answering systems; and evaluation of retrieval effectiveness.

CS 626 Distributed Computing Systems. (3-0) Three hours.
Prerequisite: CS 606.
An advanced treatment of the theory and practice of constructing distributed systems, in which concurrent processes communicate by exchanging messages.

CS 630 Advanced Software Engineering Principles. (3-0) Three hours.
Prerequisite: CS 600.
Advanced study in theoretical foundations of software engineering: software process modeling, metrics, and cost estimation; formal specifications; testing and verification techniques; exposure to research methods.

CS 631 Software Engineering Practice and Experience. (3-0) Three hours.
Prerequisite: CS 600.
Introduction to the application of software engineering principles to large-scale programming projects. Emphasis is on object-based construction, CASE tools, and contemporary development environments.

CS 637 Design of Collaborative Software. (3-0) Three hours.
Prerequisites: Graduate standing in Computer Science or Computer Engineering.
An investigation of collaborative software that allows multiple users to interact with a single computer simultaneously through large-format displays. Topics include architectures, OS support, input devices, graphical user interfaces, APIs for collaborative software and migration of existing software to multiuser environments.
**CS 665 Fuzzy Set Theory.** (3-0) Three hours.
Prerequisite: CS 605.
This course covers the various issues of uncertainty, information theory, and system complexity from a perspective based on fuzzy set theory. Mathematical foundations of fuzzy sets, various aspects of fuzzy relations, and fuzzy measures and their relation to information theory are discussed.

**CS 671 Graph Theory and Algorithms.** (3-0) Three hours.
Prerequisite: CS 601 or MATH 550.
This course presents advanced algorithms for solving graph problems. Classical results from graph theory are introduced to motivate or explain these algorithms.

**CS 672 Parallel Computation.** (3-0) Three hours.
Prerequisite: CS 601 or ECE 684.
This course presents techniques for designing and analyzing algorithms for many models of parallel computation.

**CS 686 Advanced Computer-Human Interface.** (3-0) Three hours.
Prerequisite: CS 607.
Corequisite: IE 533.
Advanced topics in the computer-human interface, including graphical user interfaces, computer-supported cooperative work, different interface styles, user interface management systems, online documentation, and hypermedia. Software user interface design philosophy and evaluation methods.

**CS 691 Special Topics in Computer Science.** (3-0) Three hours.
Formal courses that cover new and innovative topics in computer science and do not yet have their own numbers; specific course titles will be announced.

**CS 692 Independent Study in Computer Science.** Variable credit.
This course requires a written proposal that must be approved by the sponsoring faculty member before registration.

**CS 699 Dissertation Research.** Variable credit. Three-hour minimum.
The Department of Electrical and Computer Engineering offers programs leading to the master of science and doctor of philosophy degrees. The department has focused on three main research areas: devices and materials; electromechanical systems; and embedded systems. These efforts are supported by multiple research laboratories within the department. In addition to department research laboratories, students have access to facilities in the Center for Materials for Information Technology. For computing purposes, students may use numerous PC and workstation networks supported by the department and the College of Engineering.

Admission Requirements
Applicants for graduate work in electrical and computer engineering must apply for admission to the Graduate School. Each applicant must submit a statement of purpose. Regular admission may be granted to an applicant who has an electrical engineering degree from an ABET-accredited program and an overall GPA above 3.0 on a 4.0 scale. Electrical engineering graduates from non-ABET accredited programs can be awarded regular admission if they have overall GPAs of 3.0 on a 4.0 scale and an acceptable general test score on the Graduate Record Examination. Conditional admission may be granted to applicants who do not meet these requirements, such as those who have degrees in related fields or GPAs below 3.0. International students must have minimum TOEFL scores of 585 for the MS degree program and 620 for the PhD program.

Additional information is in the Admission Criteria section of this catalog.

Degree Requirements:
Master of Science
The department offers MS degrees with a thesis (Plan I) and a nonthesis (Plan II) option.

Plan I requires 30 credit hours with at least 24 at the graduate level (i.e., at the 500 or 600 level). These credit hours must include at least 12 hours in a concentration area within electrical and computer engineering; 3 hours in mathematics, general engineering studies, or the sciences (physics, chemistry, or biology); 9 hours in an approved elective area; and 6 hours of thesis research. Majoring in some areas of specialization may require specific courses in that area. The student must pass a final comprehensive examination, which typically is a presentation and defense of the thesis.

Plan II requires 30 credit hours with at least 24 at the graduate level (i.e., at the 500 or 600 level). These credit hours must include at least 15 hours in a concentration area within electrical and computer engineering; 3 hours in mathematics, general engineering studies, or the sciences (physics, chemistry, or biology); and 12 hours in an approved elective area. A graduate supervisory committee approved manuscript authored or co-authored by the candidate, and submitted to a refereed journal or conference shall constitute the University of Alabama Graduate School "culminating" or "capstone" experience requirement for an MS Plan II degree in Electrical and Computer Engineering. In addition, the student must satisfy all the Graduate School Degree Requirements.

Doctor of Philosophy
In the electrical and computer engineering department, the PhD degree requires a minimum of 48 credit hours of coursework. This must include 27 credit hours of closely related coursework in the major area. In addition, each student's program must include 15 hours in a minor field of electrical and computer engineering or other approved area; 6 hours in
 mathematics, general engineering studies, or science (physics, chemistry, or biology); and 24 hours of dissertation research.

Early in the program each student meets with an advisor to complete a Plan of Study. The PhD Plan of Study is available at the Graduate School website. All doctoral students must have a completed Plan of Study approved by the Graduate School no later than the semester during which the student will complete 30 semester hours of UA and/or transfer credit for the doctoral degree.

All candidates must pass a qualifying examination and a final examination. The final examination is generally a presentation and defense of the dissertation. A department-approved Admission to Candidacy for the Doctoral Degree is submitted to the Graduate School as soon as possible after passing the qualifying examination.

See the online Graduate Catalog (Sec. 4.11.3) and the College of Engineering (Sec 11.3 MS and Sec. 11.4 PhD) for details on plan of study, admission to candidacy, and all other degree requirements.

Course Descriptions
Master's degree students may earn graduate credit for a maximum of 6 semester hours of 400-level course credit but only if a form for Approval of 400-Level Course Work for Master's Credit is approved by the department and Graduate School prior to the semester in which the 400-level coursework will be taken.

ECE 504 Sensor Networks. Three hours.
Prerequisites: ECE 383.
Basic architecture and applications of wireless sensor networks (WSN). Hardware components of WSN, WSN operating systems, transport layer, routing layer, MAC layer, and data link layer of WSN.

ECE 506 Computer Communications and Networks. Three hours.
Prerequisites: CS 357, ECE 383, or consent of instructor.
Introduction to computer communications and networks. Topics include physical topologies, various protocols, the OSI and TCP/IP Reference Models, error detection and correction, routing algorithms, congestion control, example networks, and network applications.

ECE 508 Communications. Three hours.
Prerequisites: ECE 370 and MATH 355 or consent of instructor.
Analog and digital communication systems, random signals, sampling, filtering, analog-to-digital encoding, advanced digital modulation/demodulation, source encoding/decoding, channel encoding/decoding, multiplexing, system performance analysis.

ECE 509 Communications Laboratory. One hour.
Prerequisites: ECE 370 and MATH 355 or consent of instructor.
Corequisites: ECE 508.
Modeling and design of communication systems. Familiarization with specialized communications equipment and techniques. Proper use of laboratory instruments.

ECE 530 Solid State Devices. Three hours.
Prerequisites: ECE 330. Solid-state physics for semiconductor devices, PN junction, metal semiconductor junction, JFET/MESFET, MOSFET, BJT, and non-ideal behaviors of solid-state devices. Organic thin-film devices, including organic solar cells, thin-film transistors, light-emitting diodes, and their application for flexible displays.

ECE 532 VLSI Design. Three hours.
Prerequisites: ECE 332 or consent of instructor.
Digital design issues in the context of VLSI systems. Introduction to CMOS digital design methodology, layout techniques, behavioral models, circuit simulation and testing of complex systems.
**ECE 534 Mixed-Signal Circuits.** Three hours.
Prerequisites: ECE 332 or consent of instructor.
Design and testing issues in the context of mixed-signal embedded systems. Introduction to CMOS mixed-signal design methodology, layout techniques, analog-to-digital converters, digital-to-analog converters, circuit simulation, and testing and packaging of complex mixed-signal systems.

**ECE 535 Microsystems Packaging.** Three hours.
Prerequisites: ECE 332 or consent of instructor.
Microsystems packaging issues in the context of variety of packaging technologies in system-on-package, system-in-package, package-on-package, system-on-chip, and wafer-level packaging.

**ECE 538 Integrated Circuit Fabrication Principles.** Three hours.
Prerequisites: ECE 333, MTE 271, or consent of instructor.
Study of the processing tools used in semiconductor device fabrication. Topics include semiconductor fundamentals, semiconductor device fabrication processes, interconnections and contacts, integrated circuit packaging, and chip yield. Oral presentation and advanced analytical work required.

**ECE 539 Thin Film Technology.** Three hours.
Prerequisites: ECE 225 or PH 253 or consent of instructor.
Crystal structure and defects, film nucleation and growth models, growth of polycrystalline and epitaxial films, vacuum science technology, physical and chemical vapor deposition, solution based methods, thin film characterization techniques.

**ECE 540 Electromagnetic Waves.** Three hours.
Prerequisites: ECE 340 or consent of instructor.
Mathematics and physics of the radiation, propagation, and scattering of electromagnetic waves. Boundary value problems involving finite and infinite structures, waveguides, antennas, and media.

**ECE 545 Antennas.** Three hours. Prerequisites: ECE 340 or PH 332.
Transmission and reception of power and information in free space; antennas as interface elements; impedance and radiation characteristics of modern antennas.

**ECE 551 Power Electronics.** Three hours.
Prerequisites: ECE 332 and ECE 350.

**ECE 552 Power Electronics Laboratory.** One hour.
Prerequisites: ECE 332 and ECE 350. Corequisites: ECE 551.
Laboratory experience in three-phase power systems and electric machinery. Laboratory experience on the theory and operation of power electronic converters, systems, and machine drives.

**ECE 553 Power Systems.** Three hours.
Prerequisites: ECE 350.
Basic power-system concepts and per-unit quantities; transmission line, transformer, and rotating machine modeling; power flow; symmetrical component of power systems; faulted power system analysis.

**ECE 554 Power Systems Laboratory.** One hour.
Prerequisites: ECE 350. Corequisites: ECE 553.
Test and analysis of power systems and machine devices and the design of systems using devices.
**ECE 555 Electromechanical Systems.** Three hours.
Prerequisites: ECE 225 and MATH 238.
Static and dynamic modeling, analysis, and simulation of mechanical, electrical, hydraulic, and mixed systems. MATLAB and SIMULINK model development and simulation.

**ECE 561 Quantum Well Electronics and Devices.** Three hours.
Prerequisites: ECE 330 or PH 253 or consent of instructor.
Energy levels and wave functions of semiconductor microstructures; envelope function approximation; quantum wells; superlattices; excitons; optical and electrical properties; selection rules; quantum confined Stark effect; Wannier-Stark localization; field-effect transistors, tunneling devices, quantum well lasers, electro-optic modulators, quantum-well intersubband photodetectors.

**ECE 562 Semiconductor Optoelectronics.** Three hours.
Prerequisites: PH 253 or consent of instructor.
Elemental and compound semiconductors; fundamentals of semiconductor physical properties; solid state physics; optical recombination and absorption; light emitting diodes; quantum well lasers; quantum dots lasers; blue lasers; semiconductor modulators; photodetectors; semiconductor solar cell; semiconductor nanostructure devices.

**ECE 563 Magnetic Materials and Devices.** Three hours.
Prerequisites: ECE 340 or consent of instructor.
Diamagnetism and paramagnetism, ferromagnetism, antiferromagnetism, ferrimagnetism, magnetic anisotropy, domains and the magnetization process, fine particles and thin films, magnetization dynamics.

**ECE 566 Fundamentals of Nanotechnology.** Three hours.
Prerequisites: ECE 330 or PH 253.
Nanofabrication with electron-beam lithography, focused-ion beam lithography, and nanoimprint; microscopies for nanostructures, including SEM, EDX, TEM, AFM, STM; nano-scale devices based on nanostructured materials (carbon nanotubes and metal-oxide nanomaterials).

**ECE 575 Stochastic Processes.** Three hours. Same as GES 575.
Prerequisites: GES 500.
Engineering applications of probability theory. Problems on sequences of random variables, convergence, stochastic processes, stationarity, ergodicity, correlation function, spectral densities, linear systems with random inputs, design of filters and predictors, and Markov processes.

**ECE 579 Digital Control Systems.** Three hours.
Prerequisites: ECE 370, ECE 475, and either GES 451 or MATH 237.
Frequency and time domain methods in discrete time control systems; sampling of continuous-time signals, stability, transform design techniques, state variable analysis, and design techniques.

**ECE 580 Digital Systems Design.** Three hours.
Prerequisites: ECE 383.
Corequisites: ECE 581.
Digital systems design with hardware description languages, programmable implementation technologies, electronic design automation design flows, design considerations and constraints, design for test, system on a chip designs, IP cores, reconfigurable computing, digital system design examples and applications.

**ECE 581 Digital Systems Design Laboratory.** One hour.
Prerequisites: ECE 383.
Corequisites: ECE 580.
Logic design and simulation via hardware description languages, use of electronic design automation tools, and CPU design.

http://graduate.ua.edu/catalog/24300.html
ECE 582 Computer Vision and Digital Image Processing. Three hours.
Prerequisites: MATH 355 and ECE 285, or consent of instructor.
Introduction to computer vision and digital image processing with an emphasis on image
representation, transforms, filtering, compression, boundary detection, and pattern matching.

ECE 584 Advanced Computer Architecture. Three hours. Same as CS 567.
Prerequisites: ECE 383.
Computer architectures, computer design, memory systems design, parallel processing
concepts, supercomputers, networks, and multiprocessing systems.

ECE 585 Programmable Logic Controllers. Three hours.
Prerequisites: ECE 383 or consent of instructor.
Programmable Logic Controllers, fundamentals of ladder logic programming and PLC systems,
advanced PLC operation and related topics including networking, control applications, and
human-machine interface design.

ECE 586 Embedded Systems. Three hours.
Prerequisites: ECE 383
Corequisites: ECE 587
Integration of microprocessors into digital systems. Includes hardware interfacing, bus
protocols and peripheral systems, embedded and real-time operating systems, real-time
constraints, networking and distributed process control.

ECE 587 Embedded Systems Laboratory. One hour.
Prerequisites: ECE 383
Corequisites: ECE 586
Design and implementation experience with microcontrollers, interfacing, digital control
systems, bus protocols and peripheral systems, real-time constraints, embedded and real-
time operating systems, distribution process control.

ECE 593 Special Topics (Area). Variable credit.
Advanced topics of a specialized nature.

ECE 598 Research Not Related to Thesis. One to six hours.

ECE 599 Master's Thesis Research. One to twelve hours.

ECE 604 Advanced Sensor Networks. Three hours.
Prerequisites: ECE 404 or ECE 504.
Advanced topics in wireless sensor networks including time synchronization, sensor
localization, network security, and sensor data mining.

ECE 637 Fundamentals of Solid State Engineering. (Same as MTE 684) Three hours.
Prerequisite: PH 253 or by permission of the instructor.
Fundamentals of solid state physics and quantum mechanics are covered to explain the
physical principles underlying the design and operation of semiconductor devices. The second
part covers applications to semiconductor microdevices and nanodevices such as diodes,
transistors, lasers, and photodetectors incorporating quantum structures.

ECE 638 Advances in Integrated Circuit Processing. Three hours.
Prerequisites: ECE 438 or ECE 538.
Semiconductor Roadmap; wafer cleaning; thin film deposition processes, advanced
lithographic techniques; wet/dry etching; deep reactive ion etching; chemical mechanical
planarization; ultra thin oxides; low k dielectrics; high k materials; interconnect metallization;
and self assembly.

ECE 652 Operation and Control of Power Systems. Three hours.
State estimation in power systems; automatic generation control; load forecasting; economic
dispatch; power pools and interchange evaluation; energy production costing; voltage
collapse.
**ECE 661 Advanced Quantum Electronics.** Three hours.
Prerequisites: PH 253 or consent of instructor.
Advanced quantum mechanics; operators and Hilbert space; Lagrangian and Hamiltonian; quantization of harmonic oscillators and electromagnetic fields; perturbation theory; interaction of light and matter; quantum treatment of stimulated emission, spontaneous emission, and absorption, laser rate equations; semiconductor laser theory.

**ECE 662 Advanced Nanoscience.** Three hours.
Prerequisites: PH 253 or consent of instructor.
Advanced quantum physics; basics of nanotechnology; molecular and nanoelectronics; fundamentals in nanophotonics; interaction of light and matter; nanostructure characterization; Bionanotechnology.

**ECE 663 Spin Electronics.** Three hours.
Prerequisites: ECE 463 or ECE 563 or consent of instructor.

**ECE 664 Ferroelectric/Multiferroic Devices.** Three hours.
Prerequisites: ECE 439 or ECE 539 or consent of instructor.
Ferroelectricity, pyroelectricity and piezoelectricity; devices based on these properties, high permittivity and tunable dielectrics for broadband wireless communications, ferroelectric memory, pyroelectric IR sensors and piezoelectric devices for MEMS; multiferroic materials and their impact on future technologies.

**ECE 674 Nonlinear Control Systems.** Three hours. Same as AEM 578.
Prerequisites: ECE 475.
Classical and modern methods for the analysis and design of nonlinear automatic control systems. State variables, phase plane, describing functions, relay control, and optimal and adaptive control systems are covered.

**ECE 680 System-on-Chip Design.** Three hours.
Prerequisites: ECE 580 and ECE 581, or consent of instructor.
Basic issues in System-on-Chip (SOC) design, SOC hardware structures, SOC design methodologies, system-level design of complex SOCs, configurable processors, advanced topics in SOC design.

**ECE 686 Real-Time Systems.** Three hours.
Prerequisites: ECE 586 and ECE 587, or consent of instructor.
Introduction to real-time systems, hard vs. soft real-time, multi-tasking, real-time scheduling including rate monotonic, deadline monotonic, and several list-based and priority scheduling algorithms.

**ECE 693 Special Topics (Area).** One to five hours.
Advanced topics of a specialized nature.

**ECE 698 Research Not Related to Dissertation.** One to six hours.

**ECE 699 Doctoral Dissertation Research.** Three to twelve hours.
11.6.7  DEPARTMENT OF MECHANICAL ENGINEERING (ME)
Chair: Professor K. Clark Midkiff, Office: 165 B Hardaway Hall

The department offers programs leading to the master of science in mechanical engineering degree and the doctor of philosophy in the area of mechanical engineering.

Two basic plans are available for earning an MS degree, one requiring a thesis (Plan I) and one not requiring a thesis (Plan II). During the first semester in residence, a student enrolled in any graduate program should form a supervisory committee and, in counsel with an advisor, submit a program of courses for the degree. Forms and information for this purpose can be obtained in the departmental office.

Research
The department has active research programs in automotive engineering, acoustics, biomedical engineering, combustion, computational modeling and simulation, IC engines, control systems, energy systems, energy conservation, manufacturing, propulsion and space exploration, vibrations, and vehicle dynamics. To support research, the department maintains well-equipped laboratories for engines, computer-aided automation, numerical modeling, vibro-acoustics and sound quality, metrology and precision engineering, combustion, and propulsion and space exploration. The department also maintains a modularized area capable of supporting many separate projects, as well as a student machine shop. Students have easy access to modern computer facilities, including a departmental computer room.

Admission Requirements
Descriptions of the Graduate School Admission Criteria and the College of Engineering General Admission requirements are in earlier sections of this catalog.

A master's degree applicant for a mechanical engineering program should normally have a baccalaureate degree in mechanical engineering from an ABET-accredited curriculum or a recognized international university. Applicants in related areas such as science and mathematics are encouraged; however, prerequisite undergraduate courses will be required that will not apply for graduate credit.

Admission to the PhD program usually requires completion of a master's degree; however, exceptionally qualified applicants may be admitted directly to the PhD program from the bachelor's degree.

The GRE is not required for graduates from ABET-accredited programs. All other applicants must submit GRE scores. International students generally must submit TOEFL or equivalent scores in English language proficiency.

Degree Requirements
Graduate School Degree Requirements and College of Engineering MS and PhD degree requirements are detailed in earlier sections of this catalog. Also refer to the online Graduate Handbook on the departmental homepage.

Master's Degree Requirements
Plan I. All students on teaching or research assistantships in the department are expected to pursue the Plan I option. The following are the department's requirements for the Plan I Master's degree:

- A minimum of 24 semester hours of approved courses (excluding ME 599) that together satisfy all other course requirements for the degree
- A minimum of 12 semester hours in a major area, of which 3 hours may be in a closely related supporting area; at least 12 of the major hours must be at the 500 and/or 600 level
- A minimum of 6 semester hours of mathematics taken in the Department of Mathematics or the College of Engineering
- An approved thesis and a minimum of 6 semester hours of ME 599.

**Plan II.** The following are the department's requirements for the Plan II Master's degree:

- A minimum of 33 semester hours of approved courses that together satisfy all other course requirements for the degree
- A minimum of 18 semester hours in a major area at or above the 500 level, of which 6 hours may be in closely related supporting areas
- A minimum of 6 semester hours of mathematics taken in the Department of Mathematics or the College of Engineering
- A comprehensive exam.

**Doctor of Philosophy.** The following are the department's requirements for the PhD degree:

- A minimum of 48 semester hours (excluding ME 699) of approved courses that together satisfy all other course requirements for the degree
- A minimum of 24 semester hours of coursework in the major technical area, of which 9 hours may be in closely related supporting areas
- A minimum of 12 semester hours in any minor technical areas included in the student's program of study
- A comprehensive exam
- An approved dissertation and a minimum of 24 semester hours of ME 699.

Early in the graduate program, each student confers with a faculty adviser to select courses, discuss when and by which method the doctoral residency requirement will be completed, discuss research interests, and so forth. Then a Plan of Study is prepared and submitted to the Graduate School. The PhD Plan of Study is available at the Graduate School website. All doctoral students must have a completed Plan of Study approved by the Graduate School no later than the semester during which the student will complete 30 semester hours of UA and/or transfer credit for the doctoral degree. Otherwise, a "hold" may be placed on future registration.

If later there are changes in the Plan of Study, the student simply submits an amended PhD Plan of Study to the Graduate School at the time that the form for Admission to Candidacy for Doctoral Degree is submitted. A department-approved Admission to Candidacy for the Doctoral Degree is submitted to the Graduate School as soon as possible after passing the comprehensive (preliminary) examination.

See the online Graduate Catalog (Sec. 4.11.3) for details on Plan of Study, Admission to Candidacy, and all other Degree Requirements.

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**Course Descriptions**

**ME 500 Intermediate Fluid Mechanics.** (3-0) Three hours. Same as AEM 500.
Prerequisites: MATH 238, ME 215, and AEM 311.
Development and use of the integral and differential forms of the equations of continuity, momentum, and energy with ideal fluids and compressible fluids. Advanced topics in fluid mechanics, including potential flow, boundary layer flow, compressible flow, and open channel flow.

**ME 501 Mechanical Engineering Analysis I.** (3-0) Three hours.
Prerequisites: ME 309, ME 349, and ME 372.
Analysis of mechanical engineering systems; presentations and application of advanced
analysis techniques for continuous and discrete dynamic systems.

**ME 502 Transport Phenomena.** (3-0) Three hours.
Prerequisites: ME 215 and AEM 311.
Steady and transient mass; energy and momentum transport in ideal and real substances.

**ME 503 Intermediate Gas Dynamics.** (3-0) Three hours. Same as AEM 503.
Prerequisites: ME 215 and AEM 311.
Basic equations and concepts of compressible flow; shock and expansion waves; and development of the generalized one-dimensional equations and solution of these equations for various types of flow, using computer software.

**ME 506 Foundations of Thermal Power Generation.** (3-0) Three hours.
Prerequisite: Graduate standing. Not open to students who have taken ME 406.
Thermal power systems; components, process analysis and modeling, fuels, combustion, environmental aspects, and availability analysis in steam and gas turbine plants. Examination of recent trends such as cogeneration and combined cycles.

**ME 509 Intermediate Heat Transfer.** (3-0) Three hours.
Prerequisites: ME 309 and AEM 311.
Intermediate treatment of conduction, convection, and radiation heat transfer.

**ME 516 Foundations of Energy Conservation and Management.** (3-0) Three hours.
Prerequisite: Graduate standing. Not open to students who have taken ME 416.
Analysis and management of energy use in residential, commercial, and industrial applications, including lighting, heating and cooling, controls, and energy management systems. Topics include economics, auditing, energy management, and alternative energy sources.

**ME 518 Principles of Combustion I.** (3-0) Three hours.
Combustion thermodynamics, flame temperature and equilibrium compositions, ignition processes, detonation and deflagration, diffusion flames, and similitude; assigned papers.

**ME 522 Reliability, Maintainability, and Total Productive Maintenance.** (3-0) Three hours.
Prerequisites: GES 255 or ME 349 or Instructor Consent. Not open to students with credit for ME 421.
Measures and methods of reliability engineering, maintainability engineering, and total productive maintenance as used in the systems design process.

**ME 525 Statistical Quality Control.** (3-0) Three hours.
Prerequisites: GES 255, or GES 400/500, or consent of instructor. Not open to students who earned credit in ME 425.
Use of statistical tools and techniques in control of quality of manufactured products. Shewhart control charts; advanced control charts; capability analysis; single, double, and multiple sampling inspection plans.

**ME 526 Design and Analysis of Experiments.** (3-0) Three hours.
Prerequisites: GES 255, OR GES 400/500, or consent of instructor. Not open to students who have earned credit in ME 426.
Design or experiments and application of analysis of variance, regression analysis, and related statistical methods.

**ME 530 Artificial Intelligence in Manufacturing.** (3-0) Three hours.
Prerequisite: GES 255 or ME 349 or Instructor Consent.
The course covers the basic concepts of fuzzy set theory, fuzzy logic, and approximate reasoning. Relationships among fuzzy set theory, probability theory, and possibility theory are discussed. Applications of fuzzy set theory in manufacturing systems are outlined.

**ME 541 Introduction to Biomedical Engineering.** (3-0) Three hours.
Prerequisites: MATH 238, PH 106, and either AEM 201 or AEM 361.
Introduction to the relationship between engineering and medicine. Modeling musculoskeletal and cardiovascular systems. Review of medical devices such as non-invasive imaging devices, biopotential electrodes and amplifiers, and assistive technology.

**ME 550 Advanced Mechanical Design.** (3-0) Three hours.
Constitutive relationships, Castigliano's method, fatigue, stochastic relationships, time-dependent properties, and other advanced topics.

**ME 561 Techniques in Experimental Research.** (2-3) Three hours.
Prerequisite: ME 360.
Design of experimental research systems; study of instrumentation, transducers, and related electronic components; data acquisition, error analysis, experiment planning, and proposal writing.

**ME 562 Intermediate Dynamics.** (3-9) Three hours. Same as AEM 562.
Prerequisites: MATH 238 and AEM 264, or permission of the instructor.
Dynamics of systems in moving coordinate frames; Lagrangian formulation and Hamilton's principle; stability and perturbation concepts for rigid body motion; motion of systems of rigid bodies in three dimensions.

**ME 564 System Simulation.** (3-0) Three hours.
Prerequisites: ME 203 and GES 132, or consent of instructor.
Co-requisite: GES 257 or GES 400/500, Not open to students who have credit for ME 464.
Simulation methodology, emphasizing discrete, computer-simulation modeling.

**ME 566 Manufacturing Systems Design.** (3-0) Three hours.
Prerequisites: Consent of instructor. Not open to students who have credit for ME 466.
Investigation of design issues and approaches for the analysis and design of manufacturing systems.

**ME 569 Production Planning and Control.** (3-0) Three hours.
Prerequisites: GES 255 or GES 400/500 and GES 501. Not open to students with credit for ME 469.
Forecasting and estimation; aggregate planning; charts and network models; resource allocation; inventory control; sequencing and scheduling; dispatching; flow control; bills of materials; and requirements planning.

**ME 570 Mechanical Vibrations.** (3-0) Three hours. Same as AEM 570.
Prerequisites: ME 372 and AEM 250.
Formulation and solution of free and forced vibration discussed. Problems with single and multiple DOFs. Both modal and frequency response techniques are discussed.

**ME 571 Fundamentals of Acoustics.** (3-0) Three hours. Same as AEM 571.
Prerequisites: MATH 238, PH 106, and either ECE 320 or ECE 225.
Fundamental physical principles underlying wave propagation and resonance in mechanical systems. Introduces applications and provides experience in acoustic and audio measurements and the associated instrumentation.

**ME 577 Advanced Linear Control.** (3-0) Three hours. Same as AEM 577.
Prerequisite: ME 475 or permission of the instructor.
Modern techniques for the analysis and design of linear control systems. Matrix formulation; multivariable control systems; state-variable concepts; discrete-time systems; optimization; and statistical design methods.

**ME 583 Computer-Aided Manufacturing.** (3-0) Three hours.
Prerequisites: DR 133 and ME 383
Introduction and application of several technologies used in computer-aided design/manufacturing, including computer-aided design, solid modeling, rapid prototyping, geometric dimensioning and tolerancing, machining process optimization, NC programming CNC machines, software-based product and process design in machining.
**ME 591 Special Problems (Area).** Variable credit. Credit awarded is based on the amount of work undertaken.

**ME 594 Special Project.** Two to six hours. Planning, executing, and presenting results of an individual project involving a research design, analysis, or similar undertaking.

**ME 598 Research Not Related to Thesis.** Variable credit.

**ME 599 Master's Thesis Research.** One to six hours.

**ME 605 Classical Thermodynamics.** (3-0) Three hours. Prerequisite: ME 215. Classical macroscopic thermodynamic analysis of systems, pure substances, mixtures, and reacting systems.

**ME 607 Conduction Heat Transfer.** (3-0) Three hours. Prerequisite: AEM 309 or equivalent. Transient, multidimensional heat conduction in various geometries, and the mathematical and numerical means to analyze them.

**ME 609 Convection Heat Transfer.** (3-0) Three hours. Prerequisite: ME 309 or equivalent. Laminar and turbulent internal and external flow, natural convection, and the mathematical and numerical means to analyze them.

**ME 611 Finite-Element Analysis of Convective Heat Transfer.** (3-0) Three hours. Prerequisites: ME 309, AEM 311, and ME 349; or permission of the instructor. Introduction to finite-element theory; Galerkin method of weighted residuals; shape functions; isoparametric elements; finite-element convective-diffusion equation; upwind methods; turbulence modeling; and utilization of commercial finite-element codes for analysis of convective heat transfer.

**ME 618 Principles of Combustion II.** (3-0) Three hours. Prerequisite: ME 518. Parameters of confined combustion; evaporation of fuel, velocity of flames, detonation, and chamber design; dynamic effects; and measuring techniques. Assigned papers.

**ME 621 Boundary Layer Theory I.** (3-0) Three hours. Same as AEM 621. Development of basic boundary layer equations and concepts. Classical incompressible solutions for laminar boundary layer, approximate solutions, and concepts of turbulence.

**ME 629 Radiation Heat Transfer.** (3-0) Three hours. Prerequisite: ME 309. Physical laws of thermal radiation; implications of entropy and probability; view factors; geometrical and spectral characteristics; and absorbing-scattering media.

**ME 662 Advanced Dynamics.** (3-0) Three hours. Prerequisite: ME 562. Stability of autonomous and non-autonomous dynamical systems; Hamilton mechanics and canonical systems; analytical solution applying perturbation techniques; and analysis of dynamic behavior using geometric theory.

**ME 677 Optimal Control.** (3-0) Three hours. Prerequisite: ME 577. Optimal control of dynamic processes; calculus of variations; Hamilton-Jacobi Theory; Pontryagin’s maximum principle; dynamic programming.

**ME 678 Advanced Topics in Control.** (3-0) Three hours. Advanced topics in nonlinear, discrete-time, optimal, and learning systems.
**ME 691:692 Special Problems (Area).** Variable credit. Credit awarded is based on the amount of work undertaken.

**ME 693 Selected Topics (Area).** One to three hours. Topics of current research in dynamics and controls, solid mechanics and structures, or thermal/fluid sciences; applications to mechanical engineering.

**ME 694 Special Project.** Two to six hours. Planning, executing, and presenting results of an individual project involving a research design, analysis, or similar undertaking.

**ME 698 Research Not Related to Dissertation.** One to six hours.

**ME 699 Doctoral Dissertation Research.** Three to twelve hours.
The department offers programs leading to the master of science in metallurgical engineering degree and to the doctor of philosophy degree in the area of materials/metallurgical engineering.

An interdisciplinary PhD degree in materials science is also offered (see catalog Section 13.1 Interdisciplinary Programs). The graduate program in metallurgical and materials engineering allows for close association between graduate students and the faculty.

Research
Research interests of the department include thermodynamics and kinetics of molten metal processes, chemical metallurgy, metal-casting, corrosion phenomena, computer modeling of solidification and other metallurgical processes, electrodynamics of molten metals, metal matrix composites, thin-film technology, tribology, magnetic materials, microgravity effects in solidification, modeling microstructural evolution, and micromechanical behavior in cast materials, fracture mechanics, refractories, molten salts, electronic materials, thin films, and fuel cells, and phase equilibria. Facilities are available for directional and high-speed solidification, levitation melting, sputtering and chemical vapor-deposition, optical and electron microscopy, X-ray diffraction, corrosion, nanoindentation, and electrochemistry, materials characterization facilities, MEMS and thermal properties, and thermodynamic properties. A metal-casting facility is equipped with up-to-date metal melting and casting equipment and is one of the finest facilities in the United States for teaching, research, and service to the metal-casting and processing industry. Well-qualified machinists are available for construction of highly specialized research equipment.

Computational facilities are comprehensive, ranging from workstations, minicomputers, and PC units with associated data-acquisition peripherals to access the campus mainframe equipment.

Admission Requirements
Admission Requirements are outlined in the Admission Criteria section of this catalog.

Degree Requirements

Master of Science
Plan I (thesis) is the standard MS degree plan. However, in exceptional cases, a student who has the approval of his or her supervisory committee may follow Plan II (non-thesis). A student who believes there are valid reasons for using Plan II must submit a written request detailing these reasons to the department head no later than midterm of the first semester in residence.

All graduate students, during the first part and the last part of their programs, are required to satisfactorily complete MTE 595 Seminar (first part) and MTE 596 Seminar (last part). This required credit is in addition to the other degree requirements. Additional information is in the Degree Requirements section of this catalog.

Doctor of Philosophy
The program for the PhD in the area of materials/metallurgical engineering is conducted jointly with The University of Alabama at Birmingham (UAB). This arrangement permits sharing of facilities, exchange of faculty, joint seminars, and a wide choice of dissertation advisors. The PhD degree in the area of materials science is also offered, in collaboration with UAB and The University of Alabama in Huntsville. Full details of this program may be found in this catalog in section 13.1 (Interdisciplinary Programs)
Course Descriptions

MTE 519 Principles of Casting and Solidification Processing. (3-0) Three hours. Overview of the principles of solidification processing, the evolution of solidification microstructure, segregation, and defects, and the use of analytical and computational tools for the design, understanding, and use of solidification processes.

MTE 520 Simulation of Casting Processes (3-0) Three hours. This course will cover the rationale and approach of numerical simulation techniques, casting simulation and casting process design, and specifically the prediction of solidification, mold filling, microstructure, shrinkage, microporosity, distortion and hot tearing. Students will learn casting simulation through lectures and hands-on laboratory/tutorial sessions.

MTE 539 Metallurgy of Welding. (3-0) Three hours. Prerequisite: MTE 380 or permission of the instructor. Thermal, chemical, and mechanical aspects of welding using the fusion welding process. The metallurgical aspects of welding, including microstructure and properties of the weld, are also covered. Various topics on recent trends in welding research.

MTE 542 Magnetic Recording Media. (3-0) Three hours. Prerequisite: MTE 271. Basic ferromagnetism, preparation and properties of magnetic recording materials, magnetic particles, thin magnetic films, soft and hard film media, multilayered magnetoresistive media, and magneto-optical disk media.

MTE 546 Macroscopic Transport in Materials Processing. (3-0) Three hours. Prerequisite: MTE 353 or permission of the instructor. Elements of laminar and turbulent flow; heat transfer by conduction, convection, and radiation; and mass transfer in laminar and in turbulent flow; mathematical modeling of transport phenomena in metallurgical systems including melting and refining processes, solidification processes, packed bed systems, and fluidized bed systems.

MTE 547 Intro to Comp Mat. Science (3-0) Three hours. This course introduces computational techniques for simulating materials. It covers principles of quantum and statistical mechanics, modeling strategies and formulation of various aspects of materials structure, and solution techniques with particular reference to Monte Carlo and Molecular Dynamic methods.

MTE 549 Powder Metallurgy. (3-0) Three hours. Prerequisite: MTE 380 or permission of the instructor. Describing the various types of powder processing and how these affect properties of the components made. Current issues in the subject area from high-production to nanomaterials will be discussed.

MTE 550 Plasma Processing of Thin Films: Basics and Applications. (3-0) Three hours. Prerequisite: By permission of instructor. Fundamental physics and materials science of plasma processes for thin film deposition and etch are covered. Topics include evaporation, sputtering (special emphasis), ion beam deposition, chemical vapor deposition, and reactive ion etching. Applications to semiconductor devices, displays, and data storage are discussed.

MTE 556 Advanced Mechanical Behavior of Materials I: Strengthening Methods in Solids. (3-0) Three hours. Same as AEM 556. Prerequisite: MTE 455 or permission of the instructor. Topics include elementary elasticity, plasticity, and dislocation theory; strengthening by dislocation substructure, and solid solution strengthening; precipitation and dispersion
strengthening; fiber reinforcement; martensitic strengthening; grain-size strengthening; order hardening; dual phase microstructures, etc.

**MTE 562 Metallurgical Thermodynamics.** (3-0) Three hours.  
Prerequisite: MTE 362 or permission of instructor.  
Laws of thermodynamics, equilibria, chemical potentials and equilibria in heterogeneous systems, activity functions, chemical reactions, phase diagrams, and electrochemical equilibria; thermodynamic models and computations; and application to metallurgical processes.

**MTE 574 Phase Transformation in Solids.** (3-0) Three hours.  
Prerequisites: MTE 373 and or permission of the instructor.  
Topics include applied thermodynamics, nucleation theory, diffusional growth, and precipitation.

**MTE 579 Advanced Physical Metallurgy.** (3-0) Three hours.  
Prerequisite: Permission of the instructor.  
Graduate-level treatments of the fundamentals of symmetry, crystallography, crystal structures, defects in crystals (including dislocation theory), and atomic diffusion.

**MTE 583 Advanced Structure of Metals.** (3-0) Three hours.  
Prerequisite: Permission of the instructor.  
The use of X-ray analysis for the study of single crystals and deformation texture of polycrystalline materials.

**MTE 585 Materials at Elevated Temperatures.** (3-0) Three hours.  
Prerequisite: Permission of the instructor.  
Influence of temperatures on behavior and properties of materials.

**MTE 587 Corrosion Science and Engineering.** (3-0) Three hours.  
Prerequisite: MTE 271 and either CH 102 or permission of the instructor.  
Fundamental causes of corrosion problems and failures. Emphasis is placed on tools and knowledge necessary for predicting corrosion, measuring corrosion rates, and combining this with prevention and materials selection.

**MTE 591:592 Special Problems (Area).** One to three hours.  
Advanced work of an investigative nature. Credit awarded is based on the work accomplished.

**MTE 595:596 Seminar.** (1-0) One hour.  
Discussion of current advances and research in metallurgical engineering; presented by graduate students and the staff.

**MTE 598 Research Not Related to Thesis.** One to six hours.

**MTE 599 Master's Thesis Research.** One to twelve hours. Pass/fail.

**MTE 622 Solidification Processes and Microstructures** (3-0) Three hours.  
Prerequisite: MTE 519  
This course will cover the fundamentals of microstructure formation and microstructure control during the solidification of alloys and composites.

**MTE 643 Magnetic Recording.** (3-0) Three hours.  
Prerequisite: ECE 341 or MTE 271.  
Static magnetic fields; inductive head fields; playback process in recording; recording process; recording noise; and MR heads.

**MTE 644 Optical Data Storage.** (3-0) Three hours.  
Prerequisite: ECE 341 or MTE 271.  
Characteristics of optical disk systems; read-only (CD-ROM) systems; write-once (WORM) disks; erasable disks; M-O recording materials; optical heads; laser diodes; focus and

http://graduate.ua.edu/catalog/24600.html
tracking servos; and signal channels.

**MTE 655 Electron Microscopy of Materials.** (3-3) Four hours.
Prerequisite: MTE 481 or permission of the instructor.
Topics include basic principles of operation of the transmission electron microscope, principles of electron diffraction, image interpretation, and various analytical electron-microscopy techniques as they apply to crystalline materials.

**MTE 670 Scanning Electron Microscopy.** (2-3) Three hours
Theory, construction, and operation of the scanning electron microscope. Both imaging and x-ray spectroscopy are covered. Emphasis is placed on application and uses in metallurgical engineering and materials-related fields.

**MTE 680 Advanced Phase Diagrams.** (3-0) Three hours.
Prerequisite: MTE 362 or permission of the instructor.
Advanced phase studies of binary, ternary, and more complex systems; experimental methods of construction and interpretation.

**MTE 684 Fundamentals of Solid State Engineering.** (3-0) Three hours.
Prerequisite: Modern physics, physics with calculus, or by permission of the instructor.
Fundamentals of solid state physics and quantum mechanics are covered to explain the physical principles underlying the design and operation of semiconductor devices. The second part covers applications to semiconductor microdevices and nanodevices such as diodes, transistors, lasers, and photodetectors incorporating quantum structures.

**MTE 685 Materials at Elevated Temperatures.** (3-0) Three hours.
Prerequisite: Permission of the instructor.
Influence of temperature on behavior and properties of materials.

**MTE 691:692 Special Problems (Area).** One to six hours.
Credit awarded is based on the amount of work undertaken.

**MTE 693 Selected Topics (Area).** One to six hours.
Topics of current research in thermodynamics of melts, phase equilibria, computer modeling of solidification, electrodynamics of molten metals, corrosion phenomena, microstructural evolution, and specialized alloy systems, nanomaterials, fuel cells, and composite materials.

**MTE 694 Special Project.** One to six hours.
Proposing, planning, executing, and presenting the results of an individual project.

**MTE 695:696 Seminar.** (1-0) One hour.
Presentations on dissertation-related research or on items of current interest in materials and metallurgical engineering.

**MTE 698 Research Not Related to Dissertation.** One to six hours.

**MTE 699 Doctoral Dissertation Research.** Three to twelve hours. Pass/Fail.
Admission Requirements
The master of science degree offered through the College of Human Environmental Sciences reflects a diverse range of missions and objectives. Enrollment in all specializations is limited and competitive. Admissions are supervised by committees of the graduate faculty in each of the specializations. General application and admission requirements are outlined in the Admission Criteria and Application sections of this catalog. Students with deficiencies in undergraduate preparation may be required to complete designated undergraduate requirements before admission to the program.

General Degree Requirements
The following is a brief summary of requirements; students should confer with their department heads for additional information. A program plan for completing course requirements for the master’s degree must be approved by the student’s major advisor and committee and filed in the office of the dean of the College of Human Environmental Sciences no later than the beginning of the second semester of graduate study. Program plans are based on undergraduate preparation, previous experiences, and expressed objectives for graduate study. Students pursuing the master of science in human environmental sciences can specialize in one of the following areas: clothing, textiles, and interior design; consumer sciences; human nutrition; human development and family studies; and general studies in human environmental sciences. Students may complete degree requirements following Plan I (thesis) or Plan II (nonthesis).

Plan I (thesis). All Plan I students must earn a minimum of 24 semester hours of credit, including HES 509, one course in statistics, and 18 hours in courses in the area of specialization and in areas supporting the specialization. In addition, all Plan I students must complete at least 6 semester hours of thesis research and write a thesis. The format of the thesis may vary, depending on the advice and consent of the thesis committee. A final oral examination is required upon completion of the thesis, and a manuscript of publishable quality based on the thesis research is expected of each Plan I degree candidate.

Plan II (nonthesis). Students pursuing the master of science in human environmental sciences degree under Plan II complete 30 hours of coursework, including HES 509, and a final evaluation as determined by departmental guidelines.

Admission to Candidacy
Admission to the Graduate School does not imply admission of a student to candidacy for a degree. Admission to candidacy is contingent upon the recommendation of the student’s department and the approval of the graduate dean.

The application for Admission to Candidacy for the Master's Degree should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama. It must be approved by the time of registration for the semester in which requirements for the degree are completed.

Information on Admission to Candidacy and all other degree requirements is in the the Degree Requirements section of this catalog.

Repeating Courses in Selected Programs
Students majoring in Human Nutrition, Consumer Sciences, or Human Development and Family Studies are permitted to repeat a course in which a grade of C was earned. The option to repeat a course is not available to HES students in any program other than these three. Both grades earned will be recorded on the transcript and will be included in the computation of the grade point average. Only one attempt will count in the Plan of Study, and the second attempt will not reduce the minimum number of hours required for the degree.
(The Graduate Council approved the above policy as a waiver to the usual policy on not being able to repeat a course in which a C was earned. The policy’s effective date was September 25, 2007.)
12.1.1 AREAS OF SPECIALIZATION
Masters of Science

- Clothing, Textiles and Interior Design
- Consumer Sciences
- General Studies in Human Environmental Sciences
- Human Development & Family Studies
- Human Nutrition

Clothing, Textiles, and Interior Design
The specialization in clothing, textiles, and interior design provides preparation for careers in higher education, business and industry, and government services, and for admission to doctoral programs in clothing, textiles, and interior design and related fields. The specialization is designed to stimulate independent thought and develop skills in problem solving, creativity, and research methods. Individualized programs of study are planned to develop professional competence in the student's area of interest. Students applying for admission to the specialization in clothing, textiles, and interior design refer to the requirements for admission detailed in an earlier section of this catalog. All applicants must submit test scores from either the Graduate Record Examination or the Miller Analogies Test in support of the application. All applicants in interior design must also submit portfolios for review. A grade of B or higher must be earned in all courses taken in the Department of Clothing, Textiles and Interior Design for application toward degree requirements.

Consumer Sciences
The consumer sciences specialization offers preparation for careers in government, consumer protection, financial services, and extension, and for further study leading to the doctoral degree. Each student's curriculum is determined individually, based on career goals and research interests. Students applying for admission to the specialization in consumer sciences refer to the requirements for admission detailed in an earlier section of this catalog. Applicants who do not have an undergraduate GPA of at least 3.0 or a GPA of at least 3.0 in the last 60 hours of undergraduate coursework will be required to submit an acceptable test score on either the Graduate Record Examination (GRE) or Miller Analogies Test (MAT).

Core courses required of all students include CSM500, CSM504, CSM510, CSM520, CSM554, CSM559, and CSM560. Nine hours of electives will be selected from the following courses: CSM525, CSM508, CSM575, CSM581, and CSM586. For those students planning to write a thesis, Thesis Research (CSM599) offers the opportunity to work with faculty. Current research topics in the field include family and personal expenditure patterns; effects of credit use; time use; and individual and family resource management. Students who wish to specialize in family financial planning and counseling should have completed the following courses or equivalents at the undergraduate level EC 110, EC 111, ST 260, and CSM 204.

The program in Consumer Sciences participates in the University Scholars Program. Qualified students begin graduate study in the senior year. This program leads to the completion of requirements for both the bachelor's and master's degrees. A student who wishes to exercise this option will normally apply to Phase I of the program in the sophomore year; however, students may apply directly to Phase II of the program at the end of the junior year. Procedures are detailed in the Admission Criteria section of this catalog.

General Studies in Human Environmental Sciences
The specialization in general human environmental sciences is designed to permit students to pursue work in more than one area of human environmental sciences and/or to strengthen professional competence by selecting courses that support or complement an area of human environmental sciences, including: restaurant, hotel, and meetings management, interactive technology, sports management, consumer quality management, rural community health,
consumer conflict management, negotiation, and mediation; environmental health and safety management; and the certificate in family financial planning and counseling. Students interested in this specialization may complete in-depth studies in interactive technology, quality management, sport management, conflict management, environmental health and safety or restaurant and hospitality management. Students should refer to the respective website for each area of specialization for specific details. Students may work under Plan I or Plan II. Applicants must clearly state the area of specialization on the Graduate School Application.

Students applying for admission to the specialization in general studies refer to the requirements for admission detailed in an earlier section of this catalog. A student with a cumulative grade point average of 3.0, a GPA of 3.0 in the last 60 hours of coursework, or a GPA of 3.0 in a master's degree program is not required to submit standardized test scores. However, this does not guarantee admission.

Human Development & Family Studies
The specialization in human development and family studies provides students with the theoretical foundation and research skills necessary to pursue doctoral work and for advanced employment in a wide variety of occupations serving children, adults, and families. Students can choose to concentrate in human development, family studies, or marriage and family therapy. Completion of the marriage and family therapy curriculum enables students to take the licensure examination leading to Clinical Membership in the American Association for Marriage and Family Therapy. Research and clinical opportunities are provided in the College's child development laboratories. Research opportunities include working with faculty members in the following areas: language and cognitive development in young children; personality and social development of children and adolescents; parent-child relationships; risk factors associated with child development outcomes; assessment of early intervention programs; social support and well-being of adults; family strengths; and maternal depression and infant development.

Students applying for admission to the specialization in human development and family studies refer to the requirements for admission detailed in an earlier section of this catalog and should visit the Human Development and Family Studies website. All applicants must submit test scores from either the Graduate Record Examination or the Miller Analogies Test in support of the application. To graduate from master's programs in the Department of Human Development and Family Studies, students must maintain a "B" average in the courses related to the concentration.

Human Nutrition
The specialization in human nutrition prepares students to pursue doctoral study and to practice dietetics at an advanced level. The program develops research skills, stimulates independent thought, and provides detailed up-to-date knowledge of the subject matter. A student seeking eligibility to take the national examination to become a registered dietitian may apply for admission to the coordinated program in dietetics while completing the masters degree. Students specializing in human nutrition must complete NHM 560, NHM 561, NHM 562, and 9 hours of electives offered in the department. In addition, students must enroll in NHM 595 Seminar in Nutrition and Food a minimum of two semesters unless they receive an exemption from the department head. Students must earn a B or higher in each class taken within the nutrition department.

The thesis for the human nutrition specialization should focus on current nutritional concerns in which the student has a special interest. Students also have opportunities to participate in research with faculty members. Examples of faculty research include obesity and dieting practices, maternal and infant nutrition, healthy eating patterns, nutrition education and service delivery, and nutrient analysis of foods.

Students who choose the non-thesis option (Plan II) must complete one of the following culminating experiences: an advanced practicum, non-thesis research (NHM 598), or a comprehensive examination.

The program in human nutrition participates in the University Scholars Program. Qualified
students begin graduate study in the senior year. This program leads to the completion of requirements for both the bachelor’s and master’s degrees. A student who wishes to exercise this option will normally apply to Phase I of the program in the sophomore year; however, students may apply directly to Phase II of the program at the end of the junior year. Procedures are detailed in the Admission Criteria section of this catalog. Students who apply to the University Scholar Program in Human Nutrition must have an overall GPA of 3.5 or higher.

Students applying for admission to the specialization in human nutrition refer to the requirements for admission detailed in an earlier section of this catalog. A student with a cumulative grade point average of 3.0, a GPA of 3.0 in the last 60 hours of coursework, or a GPA of 3.0 in a master's degree program is not required to submit standardized test scores.

For additional degree requirements see the Graduate School's section on Degree Requirements earlier in this catalog.
**Master of Arts**

The Department of Health Science offers the program in Health Studies leading to the Master of Arts degree. Graduates are trained to conduct needs assessments, develop intervention programs, and implement health promotion programs in a variety of settings. The master's degree program emphasizes programming relative to adolescent health, minority health, community health, work site, health promotion and disease prevention. The degree may be pursued under Plan I (thesis) or Plan II (nonthesis).

A student applying for admission to the master of arts in health studies graduate program with a cumulative grade point average of 3.0, a GPA of 3.0 in the last 60 hours of coursework, or a GPA of 3.0 in a master's degree program is not required to submit standardized test scores.

Additional information is in the Admission Criteria section of this catalog.

Admission to the Graduate School does not imply admission of a student to candidacy for a degree. Admission to candidacy is contingent upon the recommendation of the student's department and the approval of the graduate dean.

The application for Admission to Candidacy for the Master's Degree should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama and/or transferred. It must be approved by the time of registration for the semester in which requirements for the degree are completed.

The requirements for the Master of Arts degree in Health Studies follow the policies in the Graduate Catalog. The Graduate School's master's degree requirements for Plan I (thesis) and Plan II (nonthesis), Admission to Candidacy, and all other degree requirements are detailed in the Degree Requirements section of this catalog. Students should confer with their department head for additional information.

**Doctor of Philosophy**

The doctor of philosophy (PhD) degree is also offered, specializing in health education and health promotion. Candidates are supervised under a mentoring model that matches students with program faculty in areas of their research interests within the field of health education and health promotion. The degree program is offered jointly by three programs located in the College of Human Environmental Sciences at The University of Alabama, the School of Public Health at The University of Alabama at Birmingham (UAB), and the School of Education at UAB. Due to the nature of the program, it has special admission and program requirements. For information, please contact the chairperson of the Department of Health Science, Box 870311, Tuscaloosa, AL 35487-0311.

Admission requirements specific to the program and in addition to those of the Graduate School, College and department include the following:

- A grade point average of 3.0 overall (on a 4.0 scale), or in the last 60 hours in a bachelor-level program.
- An acceptable score on the Graduate Record Examination
- A 3.25 grade point average in all graduate work
- In addition, the following criteria will be considered: (a) evidence of scholarship; (b) statement of career goals, and (c) recommendations from faculty or other health professionals capable of judging the applicant's ability to complete graduate work.
Students can be admitted to either the UA or UAB campus. In either case, students must be approved for admission by a joint admission committee of the PhD program and the Graduate School. Candidates for admission must have completed a bachelor's or master's degree from an accredited institution in health education or a health-related field.

Early in the graduate program, each student confers with a faculty adviser or major professor to select courses, discuss when and by which method the doctoral residency requirement will be completed, discuss research interests, and so forth. Then a Plan of Study is prepared and submitted to the Graduate School.

The PhD Plan of Study is available at the Graduate School website. All doctoral students must have a completed Plan of Study approved by the Graduate School no later than the semester during which the student will complete 30 semester hours of UA and/or transfer credit for the doctoral degree; otherwise, a "hold" may be placed on future registration.

If later there are changes in the Plan of Study, the student simply submits an amended Plan to the Graduate School at the time that the form for Admission to Candidacy for Doctoral Degree is submitted. A department-approved Admission to Candidacy for the Doctoral Degree is submitted to the Graduate School as soon as possible after passing the comprehensive (preliminary) examination.

Doctoral students have a time limit of 7 years (21 fall, spring, and summer semesters) from the time of program admission. All Graduate School degree requirements (including details on Plan of Study and Admission to Candidacy) are listed in Section 4.11.3 of this catalog.
THE UNIVERSITY OF ALABAMA GRADUATE CATALOG

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12.3.1 COLLEGE OF HUMAN ENVIRONMENTAL SCIENCES (HES)
Dean: Professor Milla Boschung, Office: 100 Doster Hall
Associate Dean for Graduate Studies, Research and Assessment: Professor Stuart Usdan, Office: 106 Doster Hall

Course Descriptions:

HES 509 Research Methods. Three hours.
Introduction to theories and methods of research appropriate for human sciences; examination and evaluation of current research. Selection and planning of a research project are required.

HES 551 Seminar: Sport Facilities and Event Management. Three hours.
Designed for sport professionals desiring to increase their knowledge and understanding of sport facilities and event management.

HES 552 Trends and Issues. Three hours.
This course is designed for sport professionals desiring to increase their knowledge and understanding of contemporary trends and issues in national and international sport programs.

HES 554 Management & Administration in Sport Management. Three hours.
This course is designed for sport professionals desiring to increase their knowledge and understanding of management and administration issues in the sport industry.

HES 558 Applied Research. Three hours.
Development of scholarly research for publication, obtainment of grant/external finding, or design of technology/multimedia product in sport management.

HES 559 Management Strategies. Three hours.
In-depth analysis for sport professionals to study and review management and leadership strategies utilized in various sport organizations.

HES 560 Sport Management. Three hours.
This introductory course is designed for sport professionals desiring to increase their knowledge and understanding of contemporary sport management issues in the sport industry.

HES 561 Marketing, Sales and Public Relations in Sport Management. Three hours.
This course is designed for sport professionals desiring to increase their knowledge and understanding of marketing, sales, and public relations issues in the sport industry.

HES 563 Finance and Accounting in Sport Management. Three hours.
This course is designed for sport professionals desiring to increase their knowledge and understanding of financial and accounting issues in the sport industry.

HES 565 Legal and Ethics in Sport Management. Three hours.
This course is designed for sport professionals desiring to increase their knowledge and understanding of legal and ethical issues in sport management and the sports industry.

HES 570 Fellowship in Sport Management. Three hours.
Under the supervision of an approved and qualified sport management professional, the graduate student will experience activities related to job specific tasks in the sport industry. This full-time work fellowship in sport management experience must take place in a professional organization (Athletics; Hospitality & Entertainment).

HES 590 Special Problems. Three to six hours.
**HES 592 Special Problems in Sports Management.** Three to six hours. This course is designed for sport professionals desiring to increase their knowledge and understanding of sport management trends and issues.

**HES 598 Research Not Related to Thesis.** One to three hours. Development of a professional paper on a topic selected by the student and approved by the graduate committee.

**HES 650 Special Topics in Human Environmental Sciences.** Three hours. Critical analysis of current issues in selected areas of human environmental sciences. May be taken up to a total of four times.
Information on prerequisites and scheduling of courses should be obtained from the head of the department.

**CTD 524 Advanced Programming and Project Development.** Three hours. Problem analysis, research, and programming as a basis for design decisions in project development.

**CTD 525 Interior Design V.** Three hours. Planning, executing, and presenting results of an individual project, utilizing theories and applications to solve residential interior design problems.

**CTD 526 Interior Design VI.** Three hours. Planning, executing and presenting results of an individual project, utilizing theories and applications to solve contract interior design problems.

**CTD 546 Cultural Dynamics of Apparel and Textiles.** Three hours. Examination of the impact of cultural dynamics on apparel and textile production and marketing.

**CTD 548 History of Costume.** Three hours. Study of costume development from prehistoric to modern times; includes cultural forces in relation to the evolution of costume.

**CTD 549 Socio-Psychological Aspects of Clothing.** Three hours. Prerequisite: Six hours or equivalent in sociology and psychology. Application of behavioral-science theories to clothing.

**CTD 550 Apparel Design.** Three hours. Application of design principles to apparel through research and problem-solving techniques; recognition of special clothing needs.

**CTD 561 Experimental Textiles.** Three hours. Prerequisite: CTD 461. Planning, executing, and reporting textile research based on experimental methods.

**CTD 562 Textile Analysis and Evaluation.** Three hours. One lecture, two laboratories. Study of chemical and physical analysis of fibers and fabrics.

**CTD 581 Practicum in Clothing and Textiles.** One to three hours. Prerequisite: Permission of the department head and professor. Supervised experience in a business related to the major field of study.

**CTD 582 Practicum in Interior Design.** Three hours. Prerequisite: Permission of the department head and professor. Supervised experience in a business related to the major field of study.

**CTD 590 Special Problems in Clothing.** One to four hours. Independent investigation of selected topics in clothing.

**CTD 591 Special Problems in Interior Design.** One to four hours. Independent investigation of selected topics in interior design.

**CTD 592 Special Problems in Textiles.** One to four hours. Independent investigation of selected topics in textiles.
**CTD 593 Readings in Clothing and Textiles.** Three hours.
Comprehensive review and critical evaluation of the literature in clothing and textiles.

**CTD 594 Readings in Interior Design.** One to four hours.
Comprehensive review and critical evaluation of the literature in interior design.

**CTD 595 Clothing, Textiles, and Interior Design Research I.** Three hours.
Discussions emphasizing contemporary issues, trends, relevant research, professional problems, and interests of students.

**CTD 596 Research II in Clothing and Textiles.** Three hours.
Survey and evaluation of current research in clothing and textiles.

**CTD 597 Research II in Interior Design.** One to four hours.
Survey and evaluation of current research in interior design.

**CTD 598 Research Not Related to Thesis.** One to three hours.
Development of a professional paper on an apparel, textile, or interior design topic selected by the student and approved by the graduate program committee.

**CTD 599 Thesis Research.** One to six hours.
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12.3.3 DEPARTMENT OF CONSUMER SCIENCES (CSM)
Head: Professor Milla Boschung, Office: 212 Adams Hall

Information on prerequisites and scheduling of courses should be obtained from the head of the department.

CSM 500 Personal Insurance Planning and Management. Three hours.
Prerequisites: CSM 204. Survey of the myriad of personal risks facing consumers and families throughout the life cycle. An emphasis is placed on the fundamentals of risk management. Includes a comprehensive study of insurance products.

CSM 501 Consumer Protection. Three hours.
Study of laws and agencies affecting the consumer’s well-being, sources of consumer information, and discussion of current consumer issues.

Addresses current social and economic problems facing the American family.

CSM 503 Recent Developments in Family Economics. Three hours.
Current theories in the management of family resources, consumer behavior and demand, and wealth and welfare are presented.

CSM 504 Personal Investment Planning and Management. Three hours.
Prerequisites: CSM 204. Focus on personal investing in marketable securities. Covers the basics of investing, including detailed definitions of investment terms, descriptive materials on how securities are purchased and sold, theoretical models of security valuation and practical examples of how to calculate growth rates.

CSM 505 Public Policy: Social and Economic Issues. Three hours.
Detailed analysis of U.S. public policy, recognizing the broader social and economic impacts of selected policies. Students will develop a better understanding of how and why specific policies are implemented and assess the strengths and weaknesses of different policy structures.

CSM 506 Consumer Management Quality Assurance. Three hours.
Provides in-depth coverage of the primary theories and methods necessary for quality assurance in a wide range of organizational settings.

CSM 507 Consumer Quality Management Facilitation Skills. Three hours.
Provides a comprehensive study of facilitation skills necessary to lead an organization in continuous improvement.

CSM 508 Consumer Quality Management Systems. Three hours.
Provides an in-depth analysis of management systems as a method of organizing and leading business, educational, and health care institutions. Covers the primary issues related to management systems.

CSM 509 Wall Street Study Tour. Three hours.
Provides an overview of the American financial system with emphasis on financial service providers, products and markets. Includes a 6-day tour of New York's financial district, presentations by financial professionals, team activities, assignments and stock market analysis.

CSM 510 Personal Retirement Planning & Employee Benefits. Three hours.
Prerequisites: CSM 204
Fundamentals of personal retirement planning and the selection of employee benefits.

CSM 515 Customer Service. Three hours.
Provides an in-depth study of the functions and structures of customer relations as it relates to business and government agencies. Analyzes consumer needs, complaints and education.

**CSM 520 Personal Estate Planning.** Three hours.
Prerequisites: CSM 204. Techniques of personal estate planning within the family life cycle.

**CSM 521 Consumer Communications.** Three hours.
Principles, methods, techniques, and resources used in developing, presenting, and evaluating a complete consumer communications programs.

**CSM 525 Consumer Conflict Resolution.** Three hours.
Exploration of practical conflict management and a survey of the theory and practice of formal mediation. Explores the history, nomenclature, strategies and approaches to conflict mediation.

Prerequisites: CSM 525.
Explores fundamentals of workplace law as a component to mediating, managing and negotiating conflict in the workplace. Students will be trained to maximize their effectiveness as employees, managers and leaders in the workplace.

**CSM 530 Family and Consumer Law.** Three hours.
The study of family and consumer law in specific issues of marriage, parent-child relationships, divorce, and the economic consequences of divorce, as well as consumerism and a general understanding of the legal system and adversarial proceedings.

**CSM 535 Psychology of Money.** Three hours.
Innovative study of financial behaviors and their relationship to money management with emphasis placed on both theory and its application.

**CSM 537 Developing the Leader Within.** Three hours.
In-depth analysis of leadership principles, qualities, styles and models with a focus on developing leadership skills, potential within the individual students. Designed to assist students in identifying opportunities for improvement.

**CSM 545 Microcomputers in Consumer Sciences.** Three hours.
Encompasses technical skills and scientific methodologies that can be used to create computer-based solutions to real problems encountered in home economics.

**CSM 547 Digital Resources.** Three hours.
Provides students with skills to live and work in a digital environment by developing technological skills in use and application of computers, Internet, Web 2.0, mobile devices and other digital tools. Designed for all majors, totally asynchronous, delivered online.

**CSM 548 Web-Based Consumer Instruction.** Three hours.
Prepares consumer educators for virtual training environment. Provides overview of processes used in developing a web-based consumer course. Overview of online instructional technologies.

**CSM 550 Consumer Economics.** Three hours.
Examination of the role of the consumer in the economy; economic analysis of market and non-market consumption activities, incorporating relevant social, psychological, political, and ecological considerations.

**CSM 554 Personal Income Tax Management and Planning.** Three hours.
Prerequisites: CSM 204. Analysis of personal income tax management and planning as it relates to consumers and families throughout the life cycle.

**CSM 555 Food Economics.** Three hours.
Study of the world’s food supplies and population; food consumption, patterns and nutritional adequacy in the U.S.; and national and international policies and programs to combat hunger and malnutrition.

**CSM 558 Personal Financial Planning Computer Applications.** Three hours.
Prerequisites: CSM 201, CSM 204, CSM 445.
Focus is on developing a working knowledge of Microsoft Excel as it may be used to analyze problems related to personal financial planning with an emphasis on life-cycle planning and computer literacy.

**CSM 559 Techniques of Consumer Counseling.** Three hours.
Prerequisites: CSM 204
Introduces students to basic interactional interviewing skills and strategies. Course is beneficial to those entering the fields of financial planning, business, management, sales or any commercial activity that involves interpersonal communication. Students who plan to supervise and manage others would benefit by expanding theory with practical application. Students with career goals involved counseling families, couples and individuals regarding life decisions will benefit from this course.

**CSM 560 Personal Financial Planning and Counseling Techniques.** Three hours.
Systems approach to financial management for individuals and families from the perspective of planner/counselor. Focus is on analytical techniques. Emphasizes identification and development of strategies for meeting client goals.

**CSM 562 Cognition, Strategies, and Technology.** Three hours.
This course lays some of the cornerstones of the program emphasis in interactive technology, guiding students in the development of their philosophy and understanding about the use of technology in teaching and learning as well as human interactions. Topics include synchronous vs. asynchronous learning, paradigm shifts in how people learn, and a review of the theory serving to underpin this topic.

**CSM 564 Digital Tools.** Three hours.
This course was designed just for majors in the IT specialization in GHES. The focus of this course is the use of a broad range of digital tools, including the skills considered core skills required to function in the asynchronous environment of this online degree program. Building a collaborative environment, a course goal, requires this specific skill set. Computer-mediated communications applied to collaborative, web-based environments are emphasized.

**CSM 566 Multimedia Design and Development.** Three hours.
Prerequisites: CSM 564 or concurrent enrollment in CSM 564
Reviews the basic schools of thought and major theories in the field of electronic design and development. Students will learn advanced development tools in the context of actual design and development projects including a professional electronic portfolio. Students will have an opportunity to combine an understanding of the theory of design and development with advanced tools.

**CSM 568 Communication Technologies.** Three hours.
Provides majors in the IT specialization with an overview of the essential components of communication networks and tools in a Web 2.0 and wireless world. Topics include fundamental wireless communication concepts, mobile technologies, and ethics and privacy issues will be addressed.

**CSM 570 Coordination and Delivery of Information Using Digital Technologies.** Three hours.
Prerequisites: CSM 564 and CSM 566 or concurrent enrollment in CSM 564 AND CSM 566
An ever growing range of options are available for delivering information via digital technologies, including web-base tutorials, online courses, -webinars, synchronous and asynchronous communication media, multimedia presentations, Web 2.0 technologies and wireless, hand-held devices. The tools needed to coordinate these technologies will be addressed from the viewpoint of developer and content manager.
CSM 572 Needs Assessment, Planning and Evaluation. Three hours.  
Course outcomes include demonstrated understanding of program evaluation strategies based on a systems theory model for comprehensive planning, formative and summative evaluation. These evaluation activities focus on e-learning environments and applications in a wide-range of settings. Planning models are also introduced around which projects and action research can be structured.

CSM 575 Entrepreneurship in HES. Three hours.  
Sound advice and vital practical help on developing an idea into a business and the different aspects of managing a home-based or small business. Examines each segment of creating and managing a small business.

CSM 580 E-Commerce @ CHES. Three hours.  
Sound advice and vital practical help on developing an idea into a business on the internet. Addresses the different aspects of designing a web site, internet marketing, the role of search engines, measuring the effectiveness or an internet strategy.

CSM 581 Practicum. Three to six hours.  
Prerequisite: Permission of the department head and professor.  
Supervised experience in a related business, industry, or social agency.

CSM 582 Non-thesis Research and Dissemination. Three hours.  
Prerequisites: CSM 562, CSM 564, CSM 566, CSM 568, CSM 570 and HES 508 or concurrent enrollment with any of these classes or faculty approval.  
Development of a professional paper on a topic selected by the student and approved by the graduate committee and/or 582 Advisor. Focus is on preparation and planning for The Capstone Project. Includes examination and analysis of collateral research studies. Students will prepare articles for submission to a referred journal or presentation at a professional conference.

CSM 583 Special Problems in Interactive Technology. Six hours.  
Prerequisites: CSM 562, CSM 564, CSM 566, CSM 568, CSM 570, CSM 572, CSM 582, HES 508.  
This is the Capstone Project Plan II, for the IT specialization, featuring exploration of a special problem in an area of graduate study.

CSM 586 Consumer Management of Human Capital. Three hours.  
Survey of the theory and practice of employee/consumer assistance programs (EAP).

CSM 590 Special Problems in Consumer Affairs. Two to six hours.

CSM 591 Special Problems in Consumer and Family Economics. Two to six hours.

CSM 592 Special Problems in Family Financial Planning and Counseling. Two to six hours.

CSM 595 Seminar. One to four hours.  
Current developments and research in selected areas are presented.

CSM 599 Thesis Research. One to six hours.
Course Descriptions (HAT)

HAT 550 Research in Sports Medicine Health Care. Three hours. An overview of current research and theories as they relate to the physically active population.


HAT 554 Preventive Techniques in Sports Medicine Health Care. Three hours. Designed to examine preventive techniques that reduce the occurrences of injury to physically active individuals.

HAT 555 Pharmacology and Pathology in Athletic Training. Three hours. The study of acute and chronic illnesses and their response to, and impact on, physical activity. Discussion of pharmacological agents used on athletes and others engaged in physical activity.

HAT 558 Applied Research in Sports Medicine Health Care. Three hours. Prerequisites: HAT 550, HAT 552, HAT 554, and HAT 560. This course is designed to assist the allied health professional in submission of scholarly research for publication, development of technology/multimedia product, or obtainment of grant.

HAT 559 Management Strategies for Allied Health Professionals. Three hours. Designed for the entry-level allied health professional to study, review, and implement management strategies and competencies that relate to the physically active population.

HAT 560 Practicum in Sports Medicine Health Care. Three hours. Prerequisites: HAT 550, HAT 552, and HAT 554. Under the supervision of a qualified health care professional, the graduate student will experience scholarly activities related to job-specific tasks in a sports medicine health care setting.

HAT 570 Fellowship in Sports Medicine Health Care. Three to nine hours. Prerequisites: HAT 550, HAT 552, HAT 554, and HAT 560. Under the supervision of a qualified health care professional, the graduate student will experience scholarly activities related to job-specific tasks in a sports medicine health care setting.

Course Descriptions (HHE)

HHE 495:595 Workshop in Health Education. One to six hours. Short-term, concentrated course with emphasis on selected aspects of school, work site, community, or college programs in health education.

HHE 500 Rural Environment/Occupational Health. Three hours. Prerequisite: Standing as a Rural Medical Scholar or permission of the instructor. The goal of the course is to help the student recognize environmental and occupational health hazards in the rural setting, the effects of exposure to these hazards, and preventive measures that should be taken to avoid them.

HHE 504 Health Counseling. Three hours.
Diagnoses of individual needs and study of typical counseling cases; includes counseling, theory, and process related to health promotion.

**HHE 505 Health Education Curriculum and Instruction.** Three hours.
Discussion of curriculum development. Emphasis is on evaluation of objectives, principles, methods, materials, and curriculum guides in health education.

**HHE 506 Techniques of Research.** Three hours.
Designed to acquaint the student with the types of research and the methods and materials necessary for scientific inquiry; includes development of a research proposal, with emphasis on form and style.

**HHE 515 Advances in Health Promotion.** Three hours.
Open to graduate students in all divisions of the University. Designed to provide understanding pertaining to advances in the health sciences.

**HHE 520 Health Behavior.** Three hours. Designed to review research literature regarding health behavior and to analyze various models developed to explain health behavior.

**HHE 521 Basic Epidemiology.** Three hours.
Prerequisite: CHS 425 or equivalent.
A course for students in health-related fields. The basic epidemiologic approach is developed; principles and methods are learned through readings (text and published studies), lectures, discussions, and the preparation of a research design by each student.

**HHE 526 Biostatistics.** Three hours.
A course in statistical methods and concepts particularly appropriate for biomedical research and health-related subjects. Topics include descriptive statistics, probability, parametric and nonparametric procedures for one-group and two-group problems, contingency tables, and computer applications.

**HHE 530 Health Promotional Techniques.** Three hours.
Study of current health promotional techniques and programs, designed to facilitate health behavioral change. Emphasis on review of scientific literature concerning the development, implementation, and evaluation of health promotion schemes.

**HHE 540 Stress: Theory, Disease, and Management.** Three hours.
An examination of the physiological nature of stress and its interrelationships with health and disease. Emphasis is on review of scientific literature.

**HHE 542 Practical Issues in Behavioral Medicine.** Three hours.
Lectures and readings examine behaviors compromising overall health status, such as tobacco use, noncompliance; and behavioral aspects of medical conditions, such as heart disease, cancer, pain. Topics include bioethics, racial/ethnic disparities, and rural mental health. ONLY Rural Medical Scholars may register.

**HHE 550 Minority Health Issues.** Three hours.
Designed to investigate health issues as they relate to minority populations. Emphasis is on development of strategies to effectively address health problems of minorities.

**HHE 566 Evaluation in Health Education.** Three hours.
Formative, process, and outcome evaluation methods used to effectively evaluate health education/health promotion activities and programs in the community, school and work site are reviewed.

**HHE 585 Laboratory and Field Experience.** One to six hours each.
Provides for teaching laboratory, internship, and/or practicum experiences for students, according to individual needs and goals.

**HHE 595 Workshop in Health Promotion.** One to six hours.
Advanced study of special topics in health education and health promotion.
HHE 596 Independent Study in Health Education. One to six hours. Designed to provide the opportunity for independent research in any area of health education.

HHE 596 Independent Study. One to six hours.

HHE 598 Nonthesis Research. Three hours. Experimental or analytical investigation of health promotion problems.

HHE 599 Thesis Research. One to six hours. Research study in a selected area of health promotion.

HHE 602 Readings in Health Education. Three hours. An independent readings course for doctoral students.

HHE 603 Special Projects in Health Education. Three hours. Experimental or analytical investigations of problems in health education. Arranged on an independent basis for doctoral students.

HHE 604 Seminar in Health Education. Three hours. Critical and emerging issues in health education and health promotion.

HHE 605 Advanced Theoretical and Scientific Basis of Health and Health Promotion. Three hours. Examination of theoretical, scientific, historical, and philosophical issues that serve as a basis for health education and health promotion.

HHE 606 Planning and Administration of Health Education and Promotion Programs. Three hours. A comprehensive examination of models for planning health education and health promotion programs.

HHE 607 Health Communication Research. Three hours. An examination of theoretical tenets and practical applications of health communication initiatives.

HHE 667 Organization and Implementation of Health Education and Health Promotion Programs. Three hours. Study of planning and evaluation methods and procedures for health education and promotion programs; emphasis on review of current scientific literature.

HHE 685 Field Work and Laboratory Experience. One to six hours. Arranged on an independent basis for doctoral students. Participation and research in schools, communities, or work site settings.

HHE 698 Research. Three hours. Prerequisite: Doctoral student standing. Experimental or analytical investigation of problems in health.

HHE 699 Dissertation Research. Three to twelve hours. Design, research, and/or analytical investigation of a problem in the area of health to satisfy the dissertation requirement for the doctoral degree.
12.3.5 DEPARTMENT OF HUMAN DEVELOPMENT AND FAMILY STUDIES (HD)
Chair: Professor Carroll Tingle, Office: 226 Child Development Research Center

HD 501 Child Development. Three hours. Covers principles of growth and development, chief areas of concern in the field, and supporting research.

HD 512 Adult Development. Three hours. Theories of and research on development throughout adulthood—young adulthood, middle years, and aging are presented.

HD 525 Infant/Toddler Curriculum and Program Design. Three hours. Critical examination of the relations between theories and practices in early childhood education programs.

HD 533 Cultural Influences on Children and Families. Three hours. Study of the impact of cultural factors on the developing child and the family.

HD 535 Parent/Child Relationships. Three hours. Theories and research on parent/child relationships and an examination of how the parent/child relationship influences aspects of child development. Basic models of parent education and parent involvement are also examined.

HD 550 Hospitalized Children and Youth. Three hours. The developmental and psychological theories involved in the practice of child life in health care settings.

HD 551 Loss and Bereavement. Three hours. Provides students with a general overview of the grief processes as they impact children and families. Examines issues surrounding children's grief/bereavement and studies issues surrounding complicated mourning.

HD 552 Clinical Skills Development in Child Life (seminar). Three hours. Designed to examine basic assessment skills necessary for working in the field of child life.

HD 561 Theories in Family Studies. Three hours. Historical overview of and contemporary theoretical approaches for understanding family behavior. Theoretical perspectives (such as systems, exchange, developmental, behavioral, and symbolic interaction) are applied to family research and practice.

HD 562 Dynamics of Family Relations. Three hours. Study of interaction within the family, with emphasis on historical changes, major issues, marriage success and family strengths, and family processes such as communication and conflict patterns. A focus on ethnic and racial family forms is also included.

HD 566 Family Assessment. Three hours. Skills and methods for assessing relationships and families are presented.

HD 567 Pre-Practicum in Marriage and Family Therapy. Three hours. Prerequisite: Permission of the instructor. Provides students with preliminary supervised experience in a professional setting.

HD 568 Practicum in Marriage and Family Therapy I. Three hours. Prerequisite: Permission of the instructor. Provides students with supervised practice in marriage and family therapy.

HD 576 Seminar in Human Sexuality. Three hours.
Discussion and analysis of underlying issues in human sexuality research.

**HD 580 Children of Divorce.** Three hours.  
Prerequisite: HD 101 or HD 262, and the consent of the instructor.  
Theory and research regarding effects of parental divorce on children's cognitive and social-personality development.

**HD 591 Special Problems in Human Development and Family Studies.** One to six hours.  
Prerequisite: Permission of the department head and professor.  
Provides an opportunity to pursue special needs and interests. Students work primarily on their own, but under supervision.

**HD 592 Special Problems in Child Life.** One to six hours.  
Prerequisite: Permission of the department head and professor.  
Provides an opportunity to pursue special needs and interests. Students work primarily on their own, but under supervision.

**HD 595 Seminar in Human Development and Family Studies.** One hour.  
Concerns, issues, and research trends and developments in the discipline of human development and family studies are covered.

**HD 598 Research Practicum.** One to six hours.  
Prerequisite: Permission of instructor.  
Participation in a cooperative faculty/student research project related to human development.

**HD 599 Thesis Research.** One to six hours.  
Integration of theory and research related to infant behavior and development.

**HD 602 Infant Development.** Three hours.  
Examination of theoretical bases for infant development, review of paradigms for studying infant learning and cognition, and literature review of current topics of interest to infant researchers.

**HD 603 Adolescent Development.** Three hours.  
Theories of and research on adolescent development are presented. Includes an examination of physical, cognitive, and personality/social development within the context of the family, schools, and peer relations.

**HD 612 Advanced Adult Development.** Three hours.  
Evaluation of theories and research on development throughout adulthood.

**HD 626 Observational Methods in Developmental Research.** Three hours.  
An examination of the theory and practice of various observational techniques for studying children and parent-child interaction.

**HD 631 Readings in Human Development.** Three hours.  
With an interdisciplinary approach to issues and concerns in life-span development, the course examines theory and research on selected topics.

**HD 661 Theoretical Issues in Family Studies.** Three hours.  
Examination of contemporary theoretical approaches for understanding family behavior.

**HD 664 Family Crises.** Three hours.  
Research and theory related to family stresses, hardships, and coping strategies in response to normative and non-normative life events are presented. Emphasis is on the importance of family resources and social networks in stress management.

**HD 667 Practicum in Marriage and Family Therapy II.** Three hours.  
Prerequisite: Permission of the instructor and HD 567 and HD 568.
Advanced supervised practice in marriage and family therapy.

**HD 668 Internship in Marriage and Family Therapy.** Six hours. 
Prerequisite: Permission of the instructor. 
Supervised field experience in an appropriate job setting in marriage and family therapy.

**HD 689 Practicum in Human Development.** Three to six hours. 
Prerequisite: Permission of the department head and professor. 
Experience with human development in classroom teaching or agency settings.

**HD 698 Nondissertation Research.** Variable credit. 
Prerequisite: Permission of the professor. 
Participation in a cooperative faculty/student research project related to human development.

**HD 699 Dissertation Research.** Variable credit. 
Prerequisite: Permission of the professor. 
Integration of theory and research in a guided research project.
NHM 501 Nutrition for Health Professionals. Three hours. Practical application of principles of normal nutrition, including nutritive value of foods; introduction to nutrition in diseased states. Primarily for health-careers students not intended for Human Nutrition Majors.

NHM 509 Outcomes in Nutrition and Other Health-Related Services. Three hours. Students will learn how outcome measures and indicators are used in clinical decision making, evaluation, and organizational and process improvement activities.

NHM 532 Nutrition Counseling and Education. Three hours. Prerequisites: NHM 560 or permission of the instructor. Focuses on developing competency in learning-system design: special emphasis on the teaching and counseling of nutrition in various settings.

NHM 554 Experimental Food Science. Three hours. Experimental approach to studying the chemical and/or physical nature of food; related research literature; and individual experimentation.

NHM 557 Childhood Obesity. Three hours. Focuses on the physiological, genetic, environmental, and behavioral factors that predispose children and adolescents to obesity; explores the clinical and public health strategies for treatment and prevention.

NHM 560 Nutrition in the Life Cycle. Three hours. Human nutritional needs are studied from preconception through older adulthood. Methods of assessing nutritional status are included.

NHM 561 Advanced Nutrition. Three hours. Prerequisite: Biochemistry and NHM 362. Lectures and reports on and discussions of the functions of vitamins and minerals in physiological processes.

NHM 562 Advanced Nutrition. Three hours. Prerequisite: Biochemistry and NHM 362. Lectures and reports on and discussions of the functions of proteins, carbohydrates, and lipids in physiological processes.

NHM 566 Advanced Clinical Nutrition. Three hours. Prerequisite or corequisite: Biochemistry, Human Anatomy, Human Physiology, and NHM 365. Critical review of the physiological basis for nutritional management in the prevention and/or treatment of diseases of the cardiovascular, gastrointestinal, endocrine, hepatic, and renal systems.

NHM 567 Nutrition Support for the Critically Ill. Three hours. Prerequisite or corequisite: NHM 561 or NHM 562 or permission of instructor. Methods of assessing nutritional requirements of the critically ill patient and of delivering and monitoring enteral and parenteral nutrition are presented.

NHM 569 Advanced Community Nutrition. Three hours. Analysis of the structure and function of community nutrition programs.

NHM 581 Practicum in Clinical Nutrition. Three to six hours.
Prerequisites: NHM 566.
Planned clinical practice in specialized areas such as neonatal intensive care, pediatrics, gastroenterology, cardiology, nephrology, and nutrition support service.

**NHM 582 Practicum in Community Nutrition.** Three to six hours.
Prerequisite: NHM 569.
Supervised opportunity to apply knowledge and skills in areas such as nutrition service delivery, program planning, community assessment, and program evaluation.

**NHM 587 Integration of Food Systems Management.** Three hours.
Current problems in food systems management are presented, with emphasis on theories of management and integration of management functions.

**NHM 590 Special Problems in Nutrition.** Three to six hours.

**NHM 591 Special Problems in Food Science.** Three to six hours.

**NHM 592 Special Problems in Institution Administration.** Three to six hours.

**NHM 595 Seminar in Nutrition and Food.** One hour each semester.

**NHM 598 Nonthesis Research.** Three hours.
Prerequisite: Graduate status and permission of the instructor.
Experimental or analytical investigation of a food or nutrition-related issue. This course may be the capstone experience for the masters degree under Plan II and should be the last course the student takes prior to graduating.

**NHM 599 Thesis Research.** One to six hours.

**NHM 625 Nutritional Epidemiology.** Three hours.
Introduction to the principles of epidemiology and their application to nutrition. This course addresses the role of nutrition in investigating the epidemiology of chronic diseases. The course is intended for students in health-related professions.

**NHM 635: Advanced Practicum in Post-Secondary Dietetics Education.** Three to six hours.
Focuses on developing competency in learning-system design, with special emphasis on dietetics education at the college level.

**NHM 648 Secondary Analysis of Survey Data.** Three hours.
Prerequisite: Graduate-level statistics course.
An applied seminar in the secondary analysis of survey data.

**NHM 698 Nondissertation Research.** Variable credit.
Participation in a cooperative faculty-student research project related to nutrition or food science.

**RHM 521. Legal Issues in Hospitality Management.** Three hours.
Exploration of legal problems facing the hospitality industry. Legal cases related to restaurants, hotels and meeting facilities are examined.

**RHM 570. Leadership and Management in the Hospitality Industry.** Three hours.
An examination of contemporary leadership and management theories and practices used in the hospitality industry.

**RHM 571. Management of Human Resources.** Three hours.
Seminar exploring significant issues in human resources management within the hospitality industry including labor laws, motivation and other critical issues affecting human performance.

**RHM 574. Resources Management for Hospitality Operations.** Three hours.
Exploration of financial tools and techniques used in making effective managerial, business and operational decisions in hospitality organizations.

**RHM 588. Current Trends in Food Systems Management.** Three hours. An exploration of a variety of issues of importance to effective management of food service operations. Topics vary to meet students’ interests and issues facing the food service industry.

**RHM 592. Special Problems in Hospitality Management.** Three to six hours. Problems related to the operations of hospitality organizations such as hotel, restaurants, clubs and conventions and meeting management facilities.

**RHM 596. Seminar in Hospitality Management.** Three hours. Discussion, reading and exploration of operational issues related to the hospitality industry.
The University of Alabama (UA), The University of Alabama at Birmingham (UAB), and The University of Alabama in Huntsville (UAH) offer a joint interdisciplinary program leading to a doctor of philosophy degree in materials science. The PhD program in materials science is coordinated by the Tricampus Materials Science Coordinating Committee. On each campus, the program is administered by the Campus Materials Science Program Committee.

For practical purposes, students will matriculate at a single campus. Once the student chooses a campus, that campus becomes the home campus, and the student's records will be managed by the graduate school on that campus. However, once registered at one campus, a student is free to pursue, with minimum barriers, coursework or research opportunities at the other University of Alabama System campuses. Some courses may require travel to the other campuses, alternately some courses are offered online.

At all three universities, the interdisciplinary PhD program in materials science draws on various colleges and academic divisions. At UA, the program is supported by departments in both the College of Arts and Sciences and the College of Engineering. At UAB, the Schools of Medicine, Dentistry, and Optometry are involved, as are the School of Engineering and the School of Natural Science and Mathematics. At UAH, the College of Engineering and the College of Science participate in the program. The degree awarded to each successful candidate is the PhD Degree in Materials Science.

Admission Requirements

In order to qualify for regular admission to the doctoral program, a student must have satisfied the following minimum requirements common to all three universities:

- A bachelor's degree (or its equivalent) from an accredited college or university in engineering or one of the physical sciences
- "B"-level scholarship, either overall or for the last 60 semester hours of undergraduate and graduate credit
- A minimum score of 1000 on the Graduate Record Examination general test
- A TOEFL score greater than 550 (or the equivalent on other acceptable language examinations), for international students
- Letters of reference

An applicant whose scholastic record reveals a deficiency in one of the first three categories above may, upon recommendation of the Campus Materials Science Program Committee chairperson (on the campus to which the student has applied) and with approval of the respective graduate dean, be admitted on a provisional basis, as provided in graduate school regulations at each campus. However, that student must follow the appropriate graduate school's policies in achieving regularly admitted status prior to taking Program Examination I (the examination on core material).

Additional information is in the Admission Criteria section of this catalog.

Advisement

Prior to a student's admission to the program, the student will usually discuss (perhaps via email) possible research areas with one or more faculty members. If the student is admitted to the program, the letter of admission will designate a faculty member as the tentative dissertation advisor. The advisor and/or research area can be changed during the course of study if it appears beneficial to the student, with the approval of the Campus Materials Science Program Committee.
The advisor will assist the student in program planning (see Plan of Study in academic requirements section of this catalog) and other academic matters. The letter of admission will also designate one of the participating departments as the tentative home department (normally the department of the tentative advisor), and state whether the student will be financially supported by a Materials Science Program assistantship (some students have support from outside the program instead.)

A graduate supervisory committee will be appointed for the PhD student as soon as he or she passes Program Examination I and a research project is selected. The student and the advisor are responsible for recommending supervisory committee members, which must then be approved by the Campus Coordinator. Members of the committee will normally be selected from participating faculty in the Materials Science Program from the three campuses involved. Exceptions must be approved by the Campus Coordinator. The graduate committee normally includes the research advisor (as chairperson) and at least four other members. The graduate committee members are selected based on the student's academic interests and area of research. At least one of the committee members is from the student's research area at one of the other UA campuses, and another is from a department other than the home department on the home campus. The graduate committee is charged with supervision and approval of the student's research and course of study toward the completion of all requirements leading to the degree.

**Campus Materials Science Program Committee**
This committee administers the program on each campus. Coordination encompasses some functions that are usually handled by a single-discipline department. The Campus Materials Science Program Committee is chaired by the campus program coordinator, who acts as director or chairperson for the program.

**Degree Requirements**

**Qualifying, Comprehensive, and Other Program Examinations**
Program Examination I covers the program’s core material. The core is divided into three topic areas: (1) structure and properties; (2) characterization and testing; and (3) thermodynamics and processing. Program Examination I qualifies the student to enter the advanced program. It is administered simultaneously system-wide by the Tricampus Coordinating Committee, at pre-announced dates, at least once per year (sometimes once per semester). The individual campus program committees will solicit input from the faculty and assist in preparing and grading the system-wide examination. The student may choose to take two or all three parts of Program Examination I at a sitting (unless only one part remains to be taken). It is expected that a student must make at least one attempt to pass the exam during the first two years of study. All parts of the examination must be completed within a total of three years, or by the fourth administration of the exam if this occurs later than three years after admission. Failure to pass all parts of the examination after this time disqualifies a student from the PhD program.

Program Examination II includes a comprehensive examination covering material in the student's specialization, as well as a dissertation proposal defense. This examination is normally taken near the end of formal coursework and is prepared, administered, and graded by the student's graduate supervisory committee. The last exam is an oral exam, the dissertation defense, which also is administered by the graduate supervisory committee.

A Student Handbook describing the details of Program Examinations and other aspects of the Program is on the Program's UA Campus website.

**Candidacy and Dissertation Requirements**
Admission to candidacy for the doctoral degree is contingent upon the successful completion of Program Examinations I and II (which includes the successful presentation of a dissertation research proposal.) Normally, a student is considered eligible to take Program Examination II when all of the required coursework has been completed. A department-approved Admission to Candidacy for the Doctoral Degree is submitted to the Graduate School as soon as possible after passing the program exams. See the Degree Requirements section of this
catalog for details on plan of study, admission to candidacy, and all other degree requirements. After being admitted to candidacy, the student must complete the remaining requirements for the degree, the main requirement being the doctoral research and dissertation. A minimum of 48 credit hours of graduate coursework and 24 hours of dissertation research are required. These courses may be in any department, but the course program must be worked out in consultation with the advisor and approved by the dissertation committee. A maximum of 24 of the 48 coursework hours may be transferred from another institution, subject to approval. The Request for Transfer of Graduate Credit is on the Graduate School's website. Credits in materials-related courses earned toward a master's degree at The University of Alabama may be applied to the doctoral degree.

Residency Requirement
The minimum period in which the doctoral degree can be earned is three full academic years of graduate study. The student must spend the final or penultimate academic year in continuous residence as a full-time graduate student at one of the campuses.

Time Limits
All requirements for the doctoral degree must be completed within a period of seven years of the date of admission.

For additional residence, time limits and degree requirements information, see the Degree Requirements section of this catalog.
OVERVIEW

The Alabama Commission on Higher Education (ACHE) has authorized The University of Alabama to offer the Ph.D. in Interdisciplinary Studies when existing Ph.D. programs at the University do not meet the needs of a student and when the University has the faculty and research resources to offer such a program. The Interdisciplinary Ph.D. is designed for those few students whose interests and goals cannot be accommodated through the 46 current doctoral programs offered at The University of Alabama. The Interdisciplinary Ph.D. program must not duplicate a traditional Ph.D. program that is already offered by The University of Alabama.

Students pursue the Interdisciplinary Ph.D. under the direction of a five-member Advisory Committee. All members must be members of the Graduate Faculty at The University of Alabama and must represent at least two academic departments. The chair of the committee must be a full member of The University of Alabama Graduate Faculty.

In pursuing the degree, students follow a Plan of Study approved by the Advisory Committee and the Dean of the Graduate School. The Advisory Committee will work with the student from admission to graduation, including mentoring the student throughout the dissertation process. Every program is unique in terms of coursework, methodology and research. The Plan of Study, which includes coursework and applicable language and/or methodological requirements as determined by the Advisory Committee, must be approved prior to admission to the Interdisciplinary Studies Program.

PREREQUISITES FOR ADMISSION

Due to the demands and rigor of the Interdisciplinary Studies Ph.D. program, only students who demonstrate a high degree of self-reliance and responsibility will be considered for admission. Prior to submitting an application for the Interdisciplinary Studies Program, each prospective candidate must meet with the Assistant Dean of the Graduate School. Additionally, applicants must meet the following criteria:

1. The student must have completed a master’s degree or its equivalent at an accredited university.

2. The student must normally have a graduate GPA of 3.3 or higher, on a 4.0 scale, in their masters degree (or equivalent) and scored at the 50 percentile or better on an appropriate entrance examination (e.g., GRE, GMAT, MAT). If the student has less than a 3.3 cumulative graduate GPA, the entrance exam score must be exceptional. Interdisciplinary Ph.D. programs are not available to students who have been unsuccessful in previous graduate work.

ADMISSION PROCEDURES

An applicant must submit to the Graduate School the following materials:
1. Completed application form and application fee
2. Official transcripts from all colleges and universities that the student has attended
3. Proof of an earned master's degree
4. Three letters of recommendation
5. The results of a standardized test score
6. A statement of purpose that includes reasons for pursuing the Interdisciplinary Studies Ph.D. and career goals
7. A resume

Before admission, these additional materials must be submitted by an applicant in consultation with his/her Advisory chair. These additional materials should be submitted to Dr. Natalie Adams, Assistant Dean of the Graduate School:

1. A Program of Study signed by all members of the Advisory Committee (see Course of Study for more information). A copy of the Outline of Ph.D. Program can be found at http://www.graduate.ua.edu/academics/forms/index.html

2. A one- to two-page prospectus outlining the intended focus of research and the significance of the research to your intended field(s) of study and your own professional goals. The prospectus must be signed by your Committee Chair.

3. A brief statement prepared by the Committee chair. The statement describes the uniqueness of the proposed program and states how no existing doctoral program at The University of Alabama meets the requirements and interests of the applicant. The chair of the proposed Advisory Committee is encouraged to consult with the Assistant Dean of the Graduate School before the application is considered by the Graduate School

4. An explanation of how each of the following Graduate School requirements will be met during the program:
   - Transfer of credit (Include a list of all courses the Graduate School will be asked to accept)
   - Residency requirements (Denote the two contiguous, full-time semesters and the courses to be taken)
   - Time limits (see Graduate Catalog)
   - Comprehensive examination (must be a rigorous and use the same general procedures as the doctoral exams in the departments in which coursework is taken)
   - Admission to candidacy (see Graduate Catalog)
   - Continuous registration (see Graduate Catalog)

5. A tentative timeline for completion of coursework and dissertation

These materials must be approved by the Dean of the Graduate School before the student is admitted to the program.

COURSE OF STUDY

The Interdisciplinary Ph.D. degree provides students and faculty with opportunities for creative academic programming and research that cross the boundaries of traditional disciplines. The UA Graduate School requires that Ph.D. students must complete a minimum of 48 hours of coursework, although Interdisciplinary Ph.D. students typically take more than 48 hours. Beginning in Spring 2010 all IDS students must take NC 490/AMS 530 (Disciplinarity and American Higher Education) during the first 3 semesters of coursework. The Interdisciplinary Ph.D. coursework must be taken in two or more major areas, with 7-8 courses (21-24 credits each) in each major. These courses should include preparation for doctoral research in the areas of study. Coursework within a major may include related courses in one or more UA departments. Students may take additional courses in minor areas. A student must take at least 24 hours of dissertation research. A minimum of
15 hours in research methods or research theory and design must be apparent on the Program of Study. It is expected that the majority of courses will be at the 600 level.

It is very important that the program of study be driven by a strong conceptual foundation for the Interdisciplinary Ph.D. with specific goals and objectives. The goals and objectives must provide the foundation for the coursework. Thus, the proposal must be developed using a "top-down" approach (i.e., conceptual foundation developed first, follow by goals/objectives, then coursework) and NOT a "bottom-up" approach (i.e., identifying a group of courses that the student is interested in or has already taken in a master's program, in hopes that the courses will form a Ph.D.).

Transferred graduate courses may be included in the student’s interdisciplinary Ph.D. proposal on a tentative basis only. Transfer credit is subject to official evaluation by the Graduate School Registrar and approval by the Graduate Dean, per policies in the Graduate Catalog. The student must submit a request for evaluation of transfer credit immediately after admission and enrollment in the Interdisciplinary Ph.D. program. Coursework not approved for transfer credit must be replaced by new courses in the student’s interdisciplinary program of study, and the revised program of study must be approved by the student’s committee and Dean of the Graduate School.

COMPOSITION OF THE ADVISORY COMMITTEE

The Advisory Committee consists of at least 5 members. All committee members must be members of the Graduate Faculty at The University of Alabama before formal appointment to the committee will be made by the Dean of the Graduate School. It is expected that the applicant’s Advisory Committee chair will have competence in the proposed major area(s) of study and has the time and willingness to devote to being an academic mentor for the student throughout the Ph.D. program. The committee chair and at least one additional committee member will have experience in directing and supervising doctoral-level research.

PROGRESS TOWARDS THE DEGREE

The Program of Study developed by the Advisory Committee in the application is the plan which is followed in completing the degree. The Advisory Committee is responsible for directing the degree and ensuring that satisfactory progress is made towards completing all degree requirements (coursework, comprehensive exam, admission to candidacy, dissertation proposal, dissertation research and final oral examination). All requirements must be completed within the time limits specified in the Graduate Catalog at the time of admission.

Coursework

The Advisory Committee has the responsibility for monitoring the progress of the student in completing coursework in a timely manner. Minor changes in specific courses (e.g., substituting one course for another) require the approval of the Advisory committee. Significant changes in the scope of the coursework require the prior approval of the Dean of the Graduate School and the submission of a revised Plan of Study for approval by the Dean of the Graduate School. **Beginning in Spring 2010 all IDS students must take NC 490/AMS 530 (Disciplinarity and American Higher Education) during the first 3 semesters of coursework.**

Comprehensive Exam

The content and administration of the comprehensive exam are the responsibility of the Advisory committee. Typically, the comprehensive examination is taken after the completion
of all coursework. It is expected that the comprehensive examination for the Interdisciplinary Studies Ph.D. will be as rigorous and use the same general procedures as the doctoral exams in the departments in which coursework is taken. The specifics of the examination (including where the exam will be taken, the number of questions, the number of evaluators, the grading process, the process for reporting results to the student, etc.) should be detailed in the admission materials (see Admission Procedures).

**Admission to Candidacy**

When the Advisory Committee certifies to the Graduate School that the comprehensive exam has been passed and all other requirements set out in the Plan of Study (except the dissertation) have been satisfactorily completed, the Graduate School admits the student to candidacy.

**Dissertation**

The dissertation must be completed and defended within the time limits specified by the Graduate School at the time of admission. If testing human or animal subjects, the student is responsible for complying with the Institutional Review Board requirements before beginning research.

**Final Oral Examination**

The final oral exam for the Ph.D. is administered and evaluated by the Advisory Committee. The Graduate School should be notified of the date of the oral examination at least one month in advance. Final oral examinations are open to the University community, and a representative from the Graduate School will attend the oral examination.

**Reviews of Progress**

During each semester of the program, the student must meet with the Advisory Committee to review progress. Additionally, by May 15 each year a written summary and evaluation will be prepared by the committee chair and submitted to the Graduate School. All committee members must approve this summary and evaluations as shown by their individual signatures.

For information about graduate degree and course offerings at The University of Alabama, review the Graduate Catalog or check our web site: [http://graduate.ua.edu](http://graduate.ua.edu) All forms to be completed and submitted by doctoral students are available by clicking the Web Forms icon on the Graduate School’s homepage.
14 CAPSTONE COLLEGE OF NURSING
Assistant Dean & Professor, Graduate Programs: Dr. Joe Burrage Jr.

14.1 GRADUATE PROGRAMS IN NURSING

The Capstone College of Nursing is committed to providing excellent nursing education for our graduate students. While advancing the nursing profession through education, scholarship, and service, we meet health care needs in the community. The Capstone College of Nursing offers the following:

- Master of Science in Nursing degree to prepare Nurse Practitioners, Nurse Case Managers and Clinical Nurse Leaders.
- An RN to BSN/MSN track is available for RNs who hold an associate degree or diploma in nursing.
- A post-master’s Certificate in Nursing Case Management is also available.
- The Doctor of Nursing Practice (DNP) is a practice focused degree preparing graduates to function at the highest level in specialty practice or to assume leadership positions in health care.
- The Nurse Educator programs (MSN/EdD and EdD) are interdisciplinary courses of study offered by the College of Education and the Capstone College of Nursing, and they prepare nurses for faculty positions in colleges and universities as nurse educators, scholars, researchers, policymakers and institutional leaders.
14.2 MASTER OF SCIENCE IN NURSING PROGRAM

NURSING CASE MANAGEMENT. The Capstone College of Nursing offers the distance-based master of science in nursing (MSN) with all courses offered online. This program prepares nurses to assume leadership positions in health care administration and to coordinate and administer case management services at the macrosystems level. Case management has been defined as a "collaborative process which assesses, plans, implements, coordinates, monitors, and evaluates options and services to meet an individual's health needs through communication and available resources to promote quality, cost-effective outcomes."* Graduates of this program will be able to practice in a variety of settings, assuming leadership positions in health care organizations.

*Case Management Society of America (CMSA), Standards of Practice for Case Management (Little Rock, Arkansas: CMSA, 2002)

Admission Requirements
Applicants for the MSN degree program will be considered on a competitive basis. The following are requirements for admission into all graduate level nursing programs, but a complete description of Graduate School Admission Criteria is found in the Graduate Catalog.

For admission to the master's program, an applicant must possess a functional level of capability to perform the duties required of a Clinical Nurse Leader (CNL), Case Manager (CM), or an advanced practice registered nurse (APRN). These abilities include but are not limited to (a) adequate vision such as that required to observe changes in physical conditions, to read small print on labels and laboratory reports, and to discern subtle changes in color; (b) adequate hearing such as that required to distinguish muted sounds through a stethoscope; (c) fine motor skills and manual dexterity such as that required to turn and assist with lifting adults and to lift and carry children; (d) the mobility to respond quickly to emergency situations; (e) the ability to engage in two-way conversation and interact effectively with others orally and in writing; (f) the ability to detect odors; (g) the ability to implement the role of CNL, CM or APRN in delivering health care service in one or more delivery systems, including acute, ambulatory, managed, and integrated systems; and (h) the ability to consistently and dependably engage in critical thinking to make safe and ethical clinical judgments.

The graduate faculty of the Capstone College of Nursing has identified the skills and professional behaviors that are essential to pursue a course of study and to practice in the role of CNL, CM, or APRN. These skills include but are not limited to the skills presented in The Essentials of Master's Education in Nursing (2011), a publication of the American Association of Colleges of Nursing. If these skills and professional behaviors cannot be developed by the individual, either unassisted or with the dependable use of assistive devices, the faculty reserves the right to decline an individual’s admission or to disenroll the student from clinical courses. A copy of The Essentials of Master's Education in Nursing (2011) is available upon request from the College's Program Records Office.

Admission Requirements for Nursing Case Management
Admission requirements are consistent with those of the Graduate School. Applicants for the Master of Science in Nursing (MSN) will be considered on a competitive basis. Nurses who are interested in the Case Management/Leadership concentration are encouraged to contact the Capstone College of Nursing (CCN) Graduate Recruitment and Retention Liaison or the Assistant Dean of the Graduate Programs.

The following are requirements for admission:
1. For unconditional admission, a grade point average of at least 3.0 overall (based on a 4.0 grading scale) or 3.0 for the last 60 semester hours of undergraduate work is required.
   For conditional admission, a grade point average of at least 2.5 overall (based on a 4.0 grading scale) for undergraduate work, and a score of at least 300* on the revised
Graduate Record Exam (GRE) OR a 900** on the GRE general test OR at least in the 40th percentile on the Miller Analogies Test (MAT) is required.
2. Baccalaureate degree in nursing from an accredited school of nursing.

* As of August 2011
** Prior to August 2011

Degree Requirements
The MSN will be awarded to the student who has met the following requirements:

- GPA of 3.0 or higher
- good standing at the time of graduation
- successful completion of the required coursework

To fulfill the research requirements of the program, students may choose from two options described below:

Thesis project option
A thesis project is research conducted by one student and directed by a graduate committee. The student is awarded three semester hours of thesis project credit for a successfully completed project. An oral public defense of the thesis project is required.

Non-thesis option
Students who choose the non-thesis option participate in courses, seminars, or other faculty-directed experiences that will give them an acquaintance with the methods of research and an appreciation of the place and function of original investigation in the field.

Admission to Candidacy
Admission to the Graduate School does not imply admission of a student to candidacy for a degree. Admission to candidacy is contingent upon the recommendation of the program faculty and the approval of the graduate dean.

The application for admission to candidacy should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama and/or by transfer credit. Approval will depend on (a) the quality of the applicant's graduate work prior to the time the application is made (see the Graduate School Degree Requirements); (b) the removal of any special conditions; and (c) the certification of the Assistant Dean of Graduate Programs (ADGP) that the student is well qualified to continue work toward a degree. Students must complete and submit to the department an Admission to Candidacy for the Master’s Degree form. The department-approved form will be forwarded to the Graduate School for final approval.

The Graduate School’s Degree Requirements section of this catalog has additional information on the admission to candidacy and other degree requirements.

Curriculum
The master of science in nursing program can be completed in one year of full-time study or two or more years of part-time study.

SAMPLE NCM PROGRAM OF STUDY (FULL-TIME)

<table>
<thead>
<tr>
<th>Fall</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>NUR 501</strong> Theoretical Models for Advanced Nursing Practice with Rural Populations</td>
<td>3</td>
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<tr>
<td><strong>NUR 505</strong> Advanced Health Assessment</td>
<td>3</td>
</tr>
<tr>
<td>NUR 529/BSC 529 Advanced Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td><strong>NUR 502</strong> Issues in Community Health Care for Rural Populations</td>
<td>2</td>
</tr>
<tr>
<td>NUR 503 Informatics in Healthcare</td>
<td>2</td>
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**Total semester hours**

13
<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring</td>
<td>CHS 520 Basic Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 581/NHM 580 Research and Statistics for Health Professionals</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 520 Evidence Based Practice: Roles and Processes</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>NUR 522 Human Relations Management</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total semester hours</strong></td>
<td><strong>13</strong></td>
</tr>
<tr>
<td>Summer</td>
<td>NUR 530 Case Management Practicum</td>
<td>6</td>
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<tr>
<td></td>
<td>NUR 580 Fiscal Resource Management</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 521 Advanced Pharmacology</td>
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<td><strong>Total semester hours</strong></td>
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<td></td>
<td>Thesis (optional)</td>
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<tr>
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<td>NUR 599 Thesis Option</td>
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<tr>
<td></td>
<td><strong>Total semester hours</strong></td>
<td><strong>38-41</strong></td>
</tr>
</tbody>
</table>

**SAMPLE NCM PROGRAM OF STUDY (PART-TIME)**

**Fall I**
- NUR 501 Theoretical Models for Advanced Practice | 3
- NUR 529/BSC 529 Advanced Pathophysiology | 3
- NUR 503 Informatics in Healthcare | 2

**Total semester hours**

**Spring I**
- CHS 520 Basic Epidemiology | 3
- NUR 581/NHM 580* Research and Statistics for Health Professionals | 3

**Total semester hours**

**Summer I**
- NUR 580 Fiscal Resource Management | 3
- NUR 505 Advanced Health Assessment | 3

**Total semester hours**

**Fall II**
- NUR 502 Issues in Community Health Care for Rural Populations | 2
- NUR 522 Human Relations Management | 3

**Total semester hours**

**Spring II**
- NUR 520 Evidence Based Practice: Roles and Processes | 4
- NUR 530 Case management Practicum | 3

**Total semester hours**

**Summer II**
- NUR 521 Advanced Pharmacology | 3
- NUR 530 Case Management Practicum | 3

Thesis (optional)
MASTER OF SCIENCE IN NURSING PROGRAM: CLINICAL NURSE LEADER

The Capstone College of Nursing offers the distance-based Master of Science in Nursing (MSN) with all courses offered online. The Clinical Nurse Leader (CNL) is a master’s prepared generalist, accountable for clinical and health care environmental outcomes. The CNL functions at the microsystem level; oversees care coordination of a distinct group of patients; serves as a resource for clinical decision making; and serves as a lateral integrator of care. The CNL puts evidence-based practice into action, collects and evaluates patient outcomes, assesses cohort risk, and has the decision-making authority to change care plans when necessary.

This clinician functions as part of an interdisciplinary team by communicating, planning, and implementing care directly with other health care professionals. The CNL is a leader in the health care delivery system across all settings in which health care in delivered. Graduates of the MSN program are eligible to take the CNL certification examination offered by American Association of Colleges of Nursing (AACN) and may assume the role of Clinical Nurse Leader in a variety of health care settings.

Admission Requirements for the Clinical Nurse Leader Focus

Admission requirements are consistent with those of the Graduate School. Applicants for the MSN will be considered on a competitive basis. Nurses who are interested in the CNL concentration are encouraged to contact the Capstone College of Nursing (CCN) Graduate Recruitment and Retention Liaison or the Assistant Dean of Graduate Programs.

The following are requirements for admission:

1. For unconditional admission, a grade point average of at least 3.0 overall (based on a 4.0 grading scale) or 3.0 for the last 60 semester hours of undergraduate work is required.
   For conditional admission, a grade point average of at least 2.5 overall (based on a 4.0 grading scale) for undergraduate work, and a score of at least 300* on the revised Graduate Record Exam (GRE) OR a 900** on the GRE general test OR at least in the 40th percentile on the Miller Analogies Test (MAT) is required.

2. Baccalaureate degree in nursing from an accredited school of nursing.


* As of August 2011
** Prior to August 2011

See the Admission Criteria section of this catalog for more information.

Degree Requirements

The degree of master of science in nursing with the CNL focus will be awarded to the student who has met the following requirements:

- Successful completion of the required coursework
- GPA of 3.0 or higher
- Good standing at the time of graduation

To fulfill the research requirements of the CNL focus within the MSN program, students may choose either the thesis or non-thesis option:

Thesis option

A thesis is original research conducted by one student and directed by a graduate committee. The student is awarded three semester hours of thesis research credit for a successfully completed thesis. An oral public defense of the thesis is required. The thesis must conform to the guidelines of the Graduate School.

Non-thesis option

Students who choose the non-thesis option participate in courses, seminars, or other faculty-directed experiences that will give them an acquaintance with the methods of research and an appreciation of the place and function of original investigation in the field.
Admission to Candidacy

Admission to the Graduate School does not imply admission of a student to candidacy for a degree. Admission to candidacy is contingent upon the recommendation of the program faculty and the approval of the graduate dean.

The application for admission to candidacy should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama and/or by transfer credit. Approval will depend on (a) the quality of the applicant's graduate work prior to the time the application is made (see the Graduate School Degree Requirements); (b) the removal of any special conditions; and (c) the certification of the Assistant Dean of Graduate Programs (ADGP) that the student is well qualified to continue work toward a degree. Students must complete and submit to the department an Admission to Candidacy for the Master's Degree form. The department-approved form will be forwarded to the Graduate School for final approval.

The Graduate School's Degree Requirements section of this catalog has additional information on the admission to candidacy and other degree requirements.

Curriculum

The CNL focus of the MSN program can be completed in one year of full-time study or two or more years of part-time study.

SAMPLE CNL PROGRAM OF STUDY (FULL-TIME)

<table>
<thead>
<tr>
<th>Fall</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NUR 501</strong> Theoretical Models for Advanced Nursing Practice with Rural Populations</td>
<td>3</td>
</tr>
<tr>
<td><strong>NUR 505</strong> Advanced Health Assessment</td>
<td>3</td>
</tr>
<tr>
<td>NUR 529/BSC 529 Advanced Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td><strong>NUR 502</strong> Issues in Community Health Care for Rural Populations</td>
<td>2</td>
</tr>
<tr>
<td>NUR 503 Information in Healthcare</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total semester hours</strong></td>
<td><strong>11</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spring</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHS 520</strong> Basic Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>NUR 581/NHM 580 Research and Statistics for Health Professionals</td>
<td>3</td>
</tr>
<tr>
<td><strong>NUR 525</strong> Evidence-Based Practice Roles and Processes for CNL</td>
<td>4</td>
</tr>
<tr>
<td><strong>NUR 522</strong> Human Relations Management</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total semester hours</strong></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Summer</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NUR 535</strong> Clinical Immersion Experience</td>
<td>6</td>
</tr>
<tr>
<td><strong>NUR 580</strong> Fiscal Resource Management</td>
<td>3</td>
</tr>
<tr>
<td><strong>NUR 521</strong> Advanced Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total semester hours</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Thesis (optional)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NUR 599</strong> Thesis Option</td>
<td></td>
</tr>
<tr>
<td><strong>Total semester hours</strong></td>
<td><strong>38-41</strong></td>
</tr>
</tbody>
</table>

SAMPLE CNL PROGRAM OF STUDY (PART-TIME)

<table>
<thead>
<tr>
<th>Fall I</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NUR 501</strong> Theoretical Models for Advanced Practice Nursing with Rural Populations</td>
<td>3</td>
</tr>
<tr>
<td>NUR 529/BSC 529* Advanced Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>NUR 503 Informatics in Healthcare</td>
<td>2</td>
</tr>
<tr>
<td>Semester</td>
<td>Courses</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Spring I     | CHS 520 Basic Epidemiology 3  
               | NUR 581/NHM 580* Research and Statistics for Health Professionals 3 |
| Summer I     | NUR 580 Fiscal Resource Management 3  
               | NUR 505 Advanced Health Assessment 3 |
| Fall II      | NUR 502 Issues in Community Health Care for Rural Populations 2  
               | NUR 522 Human Relations Management 3 |
| Spring II    | NUR 525 Evidence-Based Practice Role and Processes for CNL 4  
               | NUR 535 Clinical Immersion Experience 3 |
| Summer II    | NUR 535 Clinical Immersion Experience 3  
               | NUR 521 Advanced Pharmacology 3 |
| Thesis (Optional) | NUR 599 Thesis Project 3 |

Total semester hours for degree completion: 38-41

**MASTER OF SCIENCE IN NURSING PROGRAM: NURSE PRACTITIONER**

The Capstone College of Nursing offers the distance-based Master of Science in Nursing (MSN) degree with specialization in the Nurse Practitioner (NP) Concentration in Mental Health and Primary Care for Rural Populations. This dual certification NP Concentration prepares students to sit for both the Family Psychiatric-Mental Health and Family Nurse Practitioner national certification exams. Students complete the majority of their coursework online and attend on-campus activities as often as three times a semester. The Capstone College of Nursing arranges clinical sites and preceptors for required NP clinical rotations.

Nurse Practitioners are health promotion and disease prevention experts who manage and diagnose common acute and chronic illnesses. Nurse Practitioners provide quality, safe, cost-effective care.* Nurse Practitioners teach and counsel individuals, families, and groups according to their practice specialty.*

Services provided by NP’s include, assessing, diagnosing, treating, and managing their patients’ health care needs; “ordering, conducting, supervising, and interpreting diagnostic and laboratory tests”; and prescribing “pharmacologic agents and non-pharmacologic therapies.” ** Graduates should practice according to their State practice act, and adhere to all regulatory requirements.*


Admission Requirements for the Nurse Practitioner Concentration

Admission requirements are consistent with those of the Graduate School. Applicants for the MSN will be considered on a competitive basis. Nurses who are interested in the Nurse Practitioner Concentration are encouraged to contact the Capstone College of Nursing (CCN) Graduate Recruitment and Retention Liaison or the Assistant Dean of Graduate Programs.

The following are requirements for admission:

1. For unconditional admission, a grade point average of at least 3.0 overall (based on a 4.0 grading scale) or 3.0 for the last 60 semester hours of undergraduate work is required.
   For conditional admission, a grade point average of at least 2.5 overall (based on a 4.0 grading scale) for undergraduate work, and a score of at least 300* on the revised Graduate Record Exam (GRE) OR a 900** on the GRE general test OR at least in the 40th percentile on the Miller Analogies Test (MAT) is required.

2. Baccalaureate degree in nursing from an accredited school of nursing.


   * As of August 2011
   ** Prior to August 2011

See the Admission Criteria section of this catalog for more information.

Degree Requirements

The degree of Master of Science in Nursing (MSN) with the Nurse Practitioner Concentration will be awarded to the student who has met the following requirements:

- Successful completion of the required coursework
- GPA of 3.0 or higher
- Good standing at the time of graduation

To fulfill the research requirements of the Nurse Practitioner concentration within the MSN program, students may choose either the thesis or non-thesis option:

Thesis option

A thesis is original research conducted by one student and directed by a graduate committee. The student is awarded three semester hours of thesis research credit for a successfully completed thesis. An oral public defense of the thesis is required. The thesis must conform to the guidelines of the Graduate School.

Non-thesis option

Students who choose the non-thesis option participate in courses, seminars, or other faculty-directed experiences that will give them an acquaintance with the methods of research and an appreciation of the place and function of original investigation in the field.

Admission to Candidacy

Admission to the Graduate School does not imply admission of a student to candidacy for a degree. Admission to candidacy is contingent upon the recommendation of the program faculty and the approval of the graduate dean.

The application for admission to candidacy should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama and/or by transfer credit. Approval will depend on (a) the quality of the applicant's graduate work prior to the time the application is made (see the Graduate School Degree Requirements); (b) the removal of any special conditions; and (c) the certification of the Assistant Dean of Graduate Programs (ADGP) that the student is well qualified to continue work toward a degree. Students must complete and submit to the department an Admission to Candidacy for the Master's Degree form. The department-approved form will be forwarded to the Graduate School for final approval.

The Graduate School's Degree Requirements section of this catalog has additional information on the admission to candidacy and other degree requirements.

Curriculum

The Nurse Practitioner concentration of the MSN program can be completed in two years of full-time study.
<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall I</td>
<td>NUR 501</td>
<td>Theoretical Models for Advanced Nursing Practice</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 505</td>
<td>Advanced Health Assessment</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 529</td>
<td>Advanced Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 503</td>
<td>Informatics in Healthcare</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total 11</strong></td>
<td></td>
</tr>
<tr>
<td>Spring I</td>
<td>CHS 520</td>
<td>Basic Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 520</td>
<td>Evidence Based Practice Roles and Processes (3 didactic: 1 clinical)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>NUR 522</td>
<td>Human Relations Management (2 didactic: 1 clinical)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total 10</strong></td>
<td></td>
</tr>
<tr>
<td>Summer I</td>
<td>NUR 580</td>
<td>Fiscal Resource Management (2 didactic: 1 clinical)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 521</td>
<td>Advanced Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total 6</strong></td>
<td></td>
</tr>
<tr>
<td>Fall II</td>
<td>NUR 502</td>
<td>Issues in Community Health for Rural Populations</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>NUR 585</td>
<td>Mental Health for Rural Families I (2 clinical: 2 didactic)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>NUR 586</td>
<td>Primary Care for Rural Families I (2 clinical: 2 didactic)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total 10</strong></td>
<td></td>
</tr>
<tr>
<td>Spring II</td>
<td>NUR 587</td>
<td>Mental Health for Rural Families II (2 clinical: 2 didactic)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>NUR 588</td>
<td>Primary Care for Rural Families II (2 clinical: 2 didactic)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total 8</strong></td>
<td></td>
</tr>
<tr>
<td>Summer II</td>
<td>NUR 590</td>
<td>Mental Health and Primary Care for Rural Families Residency (clinical)</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total 6</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NUR 599</td>
<td>Thesis (Optional)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total 3</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Hours 51-54</strong></td>
<td></td>
</tr>
</tbody>
</table>

A total of 14 clinical credit hours from courses after the 3 P's for a total of 1050 hours (1:75)

Family Mental Health Cert Exam = 300 hours + 225 (NUR 590) = 525 hours (500 hours required)
Family Primary Care Cert Exam = 300 hours + 225 (NUR 590) = 525 hours (500 hours required)
14.3 RN TO BSN/MSN TRACK

The RN to BSN/MSN track is an accelerated track for the experienced, highly qualified RN who holds an associate degree or diploma in nursing and who wants to obtain an advanced degree in nursing. RNs who meet MSN program admission criteria can apply for early admission to the Graduate School while completing the BSN requirements. The RN to BSN/MSN track decreases the time required to complete both the BSN and MSN degree programs. The program of study includes six to eight semester hours of credit in each of the six semesters required of the track. The BSN degree is awarded after completion of all BSN requirements in the fourth semester, and the MSN degree is awarded after completion of all MSN requirements in the sixth semester.

Admission Requirements

1. Admission/promotion to the BSN program
   a. Admission to lower division to complete current lower division requirements:
      - 3.0 GPA in last 60 semester hours of coursework
      - Unencumbered RN license and eligibility of licensure in Alabama
   b. No later than the spring semester of the year of initial enrollment, apply for promotion to the upper division. The requirements are:
      - 3.0 GPA in last 60 semester hours of coursework
      - Unencumbered Alabama RN license
      - Two years of clinical nursing experience

2. Admission to Graduate School
   By October 15 of fall I of the program of study, apply for early, expedited admission to the MSN program, contingent on completion of the first semester of BSN coursework with a GPA of 3.0 or higher, and completion of all undergraduate core requirements. Criteria:
      - Completion of at least 97 semester hours of specified coursework in BSN program
      - 3.0 GPA in last 60 semester hours of coursework
      - Unencumbered Alabama RN license
      - Two years of clinical nursing experience

Additional information is in the Admission Criteria section of this catalog.

Degree Requirements

The degree will be awarded to students who (1) successfully complete the required hours of coursework with a 3.0 or higher GPA and (2) are in good standing at the time of graduation.

Admission to Candidacy

Admission to the Graduate School does not imply admission of a student to candidacy for a degree. Admission to candidacy is contingent upon the recommendation of the program faculty and the approval of the graduate dean. The application for admission to candidacy should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama and/or by transfer credit. Approval will depend on (a) the quality of the applicant's graduate work prior to the time the application is made (see Graduate School Degree Requirements); (b) the removal of any special conditions; and (c) the certification of the graduate director that the student is well qualified to continue work toward a degree. Complete and submit the Admission to Candidacy for the Master's Degree form to the department, which then must be approved by the Graduate School.

Curriculum

The RN to BSN/MSN track can be completed in six semesters of part-time study.

Sample Program of Study

http://graduate.ua.edu/catalog/25800.html
Fall I
Course
NUR 319 Nursing Informatics 3
NUR 348 Role Transition 4
NUR 449 Community Health for Registered Nurses 5

Total semester hours 12
(See undergraduate catalog for the above course descriptions.)

Spring I
Course
NHM 580†* Research and Statistics for Health Professionals 3
CHS 520 Basic Epidemiology 3
NUR 502 Issues in Community-Based Care for Rural Populations 2

Total semester hours 8

Summer I
Course
NUR 580† Fiscal Resource Management 3
NUR 505† Advanced Health Assessment 3

Total semester hours 6

Fall II
Course
NUR 501 Theoretical Models for Advanced Nursing Practice with Rural Populations 3
NUR 522† Human Relations Management 3
BSC 529† Advanced Pathophysiology 3

Total semester hours 9

Spring II
Course
NUR 520 Evidence Based Practice: Roles and Processes 4
NUR 595 Issues in Pharmacotherapeutics 3

Total semester hours 7

Summer II
Course
NUR 530 Practicum or
NUR 535 Clinical Immersion Experience 6

Total semester hours for degree completion 48

†Courses count toward completion of BSN and MSN degree requirements.
*These courses may be taken at UAB or UAH, if available. Talk to the faculty advisor for other options.
The Capstone College of Nursing and the Manderson Graduate School of Business offer dual degrees including the master of science in nursing (MSN) and the master of arts (MA) in management. This program of study provides students with an educational background for clinical practice in nursing case management as well as health care management. Admission to this program of study is available in the fall semester.

Admission Requirements
Applicants must apply for admission to the Graduate School, meet criteria for admission to the master of science in nursing and the master of arts in management, and be recommended for admission by both the Capstone College of Nursing graduate program and the Manderson Graduate School of Business.

Additional information is in the Admission Criteria section of this catalog.

Degree Requirements
The degrees will be awarded to students who (1) successfully complete the required hours of coursework with a 3.0 or higher GPA and (2) are in good standing at the time of graduation. The degrees must be completed simultaneously.

If a student is enrolled in the dual-degree program of study and opts out of one of the degrees, the student must complete the "regular" version of the remaining degree program. That is, the student would not be able to earn the degree by completing only the truncated set of requirements that applies only to the dual degree program.

If a student opts out of one of the degrees and completes the other, then later decides to pursue the remaining degree, the student cannot complete the truncated version of that program's requirements to earn the degree. The "maximum 6 hours from a previous degree" policy would be in effect for the second degree.

Admission to Candidacy
Admission to the Graduate School does not imply admission of a student to candidacy for a degree. Admission to candidacy is contingent upon the recommendation of the program faculty and the approval of the graduate dean. A student pursuing dual degrees is required to apply for admission to candidacy for each degree.

The MSN/MA student should apply for admission to candidacy for both degrees after 12 semester hours of graduate credit have been earned at The University of Alabama and/or by transfer credit. Approval will depend on the following:

- the quality of the applicant's graduate work prior to the time the application is made (see Degree Requirements section of this catalog);
- the removal of any special conditions; and
- the certification of the graduate director that the student is well qualified to continue work toward a degree.

Complete an Admission to Candidacy for the Master's Degree form for the MSN and submit it to the College of Nursing for approval. Complete another Admission to Candidacy for the Master's Degree form for the MA in management and submit it to the Department of Management and Marketing in the Manderson Graduate School of Business. The department-approved candidacy forms will be forwarded the Graduate School for final approval. Additional information is in the Degree Requirements section of this catalog.
Curriculum
The dual MSN/MA degrees can be completed in two years of full-time study. Part-time study is available.

### SAMPLE PROGRAM OF STUDY

#### Fall I

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCM 570 Advanced US Health Care System</td>
<td>3</td>
</tr>
<tr>
<td>MGT 517 Leadership (NUR/CB&amp;A)</td>
<td>3</td>
</tr>
<tr>
<td>NUR 501A Theoretical Models of Advanced Practice Nursing with Global Populations</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total semester hours</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

#### Spring I

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 595A Issues in Pharmacotherapeutics</td>
<td>3</td>
</tr>
<tr>
<td>Business Global Management (Elective)</td>
<td>3</td>
</tr>
<tr>
<td>EC 500 Managerial Economics</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total semester hours</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

#### Summer I

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 580A Fiscal Resource Management (NUR/CB&amp;A)</td>
<td>3</td>
</tr>
<tr>
<td>OM 525 Effective Quality Management (NUR/CB&amp;A)</td>
<td>3</td>
</tr>
<tr>
<td>ST 560 Statistical Methods in Research I</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total semester hours</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

#### Fall II

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 502A Issues in Community Health for Global Populations</td>
<td>2</td>
</tr>
<tr>
<td>NUR 522A Human Relations Management (NUR/CB&amp;A)</td>
<td>3</td>
</tr>
<tr>
<td>IBA 550 International Business Management</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total semester hours</strong></td>
<td><strong>8</strong></td>
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</tbody>
</table>

#### Spring II

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 520 Evidenced Based Practice: Roles and Processes for the Case Manager</td>
<td>4</td>
</tr>
<tr>
<td>NHM 580A Research and Statistics for Health Professionals</td>
<td>3</td>
</tr>
<tr>
<td>CHS 520 Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total semester hours</strong></td>
<td><strong>10</strong></td>
</tr>
</tbody>
</table>

#### Summer II

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 530A Global Leadership and Business Case Management Practicum</td>
<td>6</td>
</tr>
<tr>
<td>GBA 525 Global Capstone Course</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total semester hours</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

**Total semester hours for degree completion**: 54
14.5 POST-MASTER'S CERTIFICATE IN NURSING

The Master of Science in Nursing (MSN) program, upon which the post-master's track is based, is designed to prepare advanced practice nurses at the master's level to practice as case managers for rural populations. Nurses who are already prepared at the master's level for roles such as nurse practitioner, clinical specialist, or nurse administrator and who need case management knowledge and expertise to enact the nurse case manager role can apply for the post-master's track. Students in the post-master's track will enroll in the existing case management courses, but they will not be required to complete the nursing core courses, such as research and theory, if they were completed in the master's program.

Admission Requirements
Admission requirements are consistent with those of the Graduate School. Applicants for the Master of Science in Nursing (MSN) will be considered on a competitive basis. Nurses who are interested in the Post Masters Certificate in Case Management are encouraged to contact the Capstone College of Nursing (CCN) Graduate Recruitment and Retention Liaison or the Assistant Dean of the Graduate Programs.

The following are requirements for admission:
1. Master's degree in nursing from an accredited graduate program in nursing or a master's degree in a health-related field with a baccalaureate degree in nursing from an accredited program.
2. For unconditional admission, a grade point average of at least 3.0 overall (based on a 4.0 grading scale) or 3.0 for the last 60 semester hours of undergraduate work is required. For conditional admission, a grade point average of at least 2.5 overall (based on a 4.0 grading scale) for undergraduate work, and a score of at least 300* on the revised Graduate Record Exam (GRE) OR a 900** on the GRE general test OR at least in the 40th percentile on the Miller Analogies Test (MAT) is required.
3. Baccalaureate degree in nursing from an accredited school of nursing.

* As of August 2011  
** Prior to August 2011

See the Admission Criteria section of this catalog for more information.

Application for Certification
Candidates for certification must apply in writing to the Senior Associate Dean for Academic Programs in the Capstone College of Nursing one semester before completion of certification requirements is anticipated.

Sample Program of Study

<table>
<thead>
<tr>
<th>Fall Course</th>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>NUR 522</td>
<td>Human Relations Management for Case Managers</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Spring Course</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 520</td>
<td>Evidence Based Practice: Roles and Processes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Summer Course</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 530</td>
<td>Case Management Practicum</td>
</tr>
</tbody>
</table>
The student's transcript and portfolio will be assessed for the following courses or proven expertise. In the absence of transcript credit or expertise evidenced via the portfolio, the courses must be completed.

- **NUR 501** Theoretical Models for Advanced Nursing Practice
- **NUR 502** Issues in Community-Based Care
- **NHM 580/NUR 581** Research and Statistics for Health Professionals
- **BSC 529/NUR 529** Pathophysiology
- **NUR 505** Advanced Health Assessment
- **CHS 520** Basic Epidemiology
- **NUR 503** Informatics in Healthcare
- **NUR 521** Advanced Pharmacology

**Total 16**
The Doctor of Nursing Practice (DNP) is a joint program offered by The University of Alabama Capstone College of Nursing (UACCN), the University of Alabama in Huntsville College of Nursing (UAHCON), and the University of Alabama at Birmingham School of Nursing (UABSON).

The DNP is a practice-focused degree to prepare graduates to function at the highest level in specialty practice or to assume leadership positions in health care. Graduates of the DNP program focus on providing care with an emphasis on improving quality and access to underserved and diverse populations. Graduates employ abilities and skills in these areas to advocate for reasonable, rational, and data-driven health regulations, standards, and practices; sustain collaborative and strategic relationships, promote innovative, effective health care programs; and form partnerships with diverse groups to address health disparities.

For most students, the post-master’s DNP curriculum is a minimum of 34 credits that includes the development of a practice or leadership focused project. This scholarly project is designed to synthesize scholarship in an advanced practice specialty or an area of healthcare leadership and serves as a capstone program experience. All courses are offered in a distance accessible format, and students will develop the scholarly project under the direction of program faculty and clinical advisors.

Admission Requirements for the Doctor of Nursing Practice

Admission requirements are consistent with those of the Graduate School. Applicants for the Doctor of Nursing Practice (DNP) will be considered on a competitive basis. Nurses who are interested in the program are encouraged to contact the Capstone College of Nursing (CCN) Graduate Recruitment and Retention Liaison or the Assistant Dean of the Graduate Programs (ADGP).

The following are requirements for admission:
1. A master’s degree in nursing from an accredited school of nursing in an advanced nursing practice area (nurse practitioner, clinical nurse specialist, nurse administrator, nurse midwife, or nurse anesthetist). Students who have a master’s degree in an area other than advanced practice may request to have their application evaluated to determine if they meet requirements for the DNP. These students, upon admission, may require additional coursework prior to beginning actual DNP courses to meet the advanced practice component.
2. Students must hold an advanced practice national certification or be eligible to sit for advanced practice national certification and pass their specific certification exam prior to completing 12 credit hours of DNP coursework. Students will be considered for a conditional admission until the requirement is completed.
3. A grade point average based on a 4.0 system, of 3.0 overall, 3.0 of the last 60 semester hours in a degree program, or 3.0 for a completed graduate degree Program.

Additional information is in the Admission Criteria section of this catalog.

Degree Completion Requirements
The Doctor of Nursing Practice will be awarded to the student who has met the following requirements:

- GPA of 3.0 or higher
- good standing at the time of graduation
- successful completion of the scholarly project
- successful completion of the required coursework and scholarly project hours

**Clinical Hours for Degree Completion**

A minimum of 1000 graduate clinical hours (MSN + DNP) is required for completion of the DNP degree. Five hundred forty of these hours will be earned in the DNP program, and the remaining hours must be documented at the master's level. Students who do not have sufficient clinical hours will be required to complete additional clinical hours as determined by the ADGP prior to the beginning of DNP courses. In such cases, 60 clinical hours are the equivalent of 1 semester credit hour.

**Time limit for doctoral study**

Doctoral programs of study may include appropriate coursework that has been earned no more than six years (18 consecutive fall, spring, and summer semesters) prior to the date of the student's admission to the doctoral program. All degree requirements must be completed within seven years (21 consecutive fall, spring, and summer semesters) of the date of the student's admission to the doctoral program.

**Residency**

The practice-focused DNP program has a practice-based residency. The student fulfills the residency requirement by satisfactorily completing the practice-focused, comprehensive, scholarly project in the final semester of the program.

Additional information is in the [Degree Requirements](http://graduate.ua.edu/catalog/26050.html) section of this catalog.

**Curriculum**

The DNP program can be completed in one year of full-time study and two years of part-time study.

**JOINT DOCTOR OF NURSING PRACTICE PROGRAM**

**Full-time Post-masters Program of Study**

<table>
<thead>
<tr>
<th>Term</th>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
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<td><strong>Year 1</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Fall</strong></td>
<td>NUR 731</td>
<td>Philosophical, Theoretical and Conceptual Foundations</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 732</td>
<td>Design and Statistics for APN</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 740</td>
<td>Health Policy and Politics: Implications in Health Care</td>
<td>3</td>
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<tr>
<td></td>
<td></td>
<td>Elective</td>
<td>3</td>
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<td></td>
<td></td>
<td>Total Semester</td>
<td>12</td>
</tr>
<tr>
<td><strong>Spring</strong></td>
<td>NUR 733</td>
<td>Informatics for APN</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 735</td>
<td>Population Health in Advanced Practice</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 736</td>
<td>Application of Best Practices</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 738</td>
<td>Scholarly Project Development Seminar</td>
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### Part-time Post-masters Program of Study

<table>
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</thead>
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<tr>
<td>Fall I</td>
<td>NUR 731</td>
<td>Philosophical, Theoretical and Conceptual Foundations</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 740</td>
<td>Health Policy and Politics: Implications in Health Care</td>
<td>3</td>
</tr>
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<td></td>
<td>Total Semester</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Spring I</td>
<td>NUR 733</td>
<td>Informatics for APN</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 735</td>
<td>Population Health in Advanced Practice</td>
<td>3</td>
</tr>
<tr>
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<td>Total Semester</td>
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<td>6</td>
</tr>
<tr>
<td>Summer I</td>
<td>NUR 737</td>
<td>Interdisciplinary Leadership and Role Development for Practice Excellence</td>
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<td>Total Semester</td>
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<td>3</td>
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<tr>
<td>Fall II</td>
<td>NUR 732</td>
<td>Design and Statistics for APN</td>
<td>3</td>
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<tr>
<td></td>
<td>Elective</td>
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<td>Total Semester</td>
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<tr>
<td>Spring II</td>
<td>NUR 736</td>
<td>Application of Best Practices</td>
<td>3</td>
</tr>
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<td></td>
<td>NUR 738</td>
<td>Scholarly Project Development Seminar</td>
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<tr>
<td>Summer II</td>
<td>NUR 739*</td>
<td>Scholarly Project</td>
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<tr>
<td></td>
<td>Total</td>
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</table>

*NUR 739 credit hours may be split across semesters. Students interested in this option should contact their faculty advisor.
14.7 MSN/DOCTORATE OF EDUCATION (EdD) for NURSE EDUCATORS and EdD for NURSE EDUCATORS

The UA College of Education and the Capstone College of Nursing offer an MSN/Doctorate of Education (EdD) for Nurse Educators and an EdD for Nurse Educators. Both programs are designed to prepare practicing nurses for nursing faculty positions. Graduates are prepared to teach nursing in two- or four-year colleges and universities in their area of expertise.

In this program, baccalaureate prepared nurses obtain a Master of Science in Nursing (MSN) degree and a Doctorate in Education (EdD) in Instructional Leadership for Nurse Educators. Nurses who have an MSN degree enter the EdD program to earn an EdD in Instructional Leadership for Nurse Educators. Coursework including the dissertation for the MSN/EdD and EdD programs can be completed in four years of full-time study.

The curricula for the MSN/EdD and EdD for Nurse Educators support the competencies for nurse educators specified by the National League for Nursing (NLN) and the Southern Regional Education Board Council on Collegiate Education in Nursing (SCCEN).

MSN-EdD dually enrolled students who have satisfactorily completed all coursework and the comprehensive examination are eligible to apply for graduation from the MSN program before the EdD is completed. To receive the MSN before EdD completion, students will be required to submit and receive Graduate School approval of the following: (1) an application for candidacy for the MSN degree; (2) an application for the MSN degree; and (3) an application for candidacy for the EdD degree. Students also must pay existing fees in accordance with Graduate School policies.

When EdD requirements are completed, the student will submit an application for the EdD degree and pay existing fees in accordance with Graduate School policies. Links to relevant forms are below:

- Admission to Candidacy for the Master's Degree
- Application for Degree
- Admission to Candidacy for the Doctoral Degree

Doctor of Education Program Planning
See the College of Education and Instructional Leadership sections of this catalog for additional policies and procedures relevant to the EdD for Nurse Educators program.

Admission Requirements for MSN/EdD and EdD for Nurse Educators

Admission requirements are consistent with those in the Admission Criteria section of this catalog. Applicants for the MSN/EdD and EdD for Nurse Educators degree programs will be considered on a competitive basis. Nurses who are interested in the programs are encouraged to contact the Nurse Educator Coordinator of Student Recruitment or the Assistant Dean of Graduate Programs (ADGP). The following are minimum requirements for admission for both programs:

1. For regular admission, a grade point average of at least 3.0 overall (based on a 4.0 system) or 3.0 for the last 60 semester hours of undergraduate work
2. For conditional admission, a grade point average of at least 2.5 overall (based on a 4.0 system) for undergraduate work, and a score of at least 300 on the Graduate Record Examination (GRE) general test or at least the 50th percentile on the Miller Analogies Test (MAT)
3. Current unencumbered RN licensure in the United States
4. Baccalaureate degree in nursing from an accredited school of nursing is required for the MSN/EdD program. An MSN from an accredited school of nursing is required for the EdD program.

Additional application information is located at http://nursing.ua.edu/graduate and in the Admission Criteria section of this catalog.

Degree Requirements
Students dually enrolled in the MSN/EdD program are eligible to apply for graduation from the MSN program before the EdD is completed. The MSN may be awarded to the student who has met the following requirements:

- GPA of 3.0 or higher
- good standing at the time of graduation
- all coursework, the comprehensive examination
- successfully defended the dissertation prospectus
- Graduate School approval of the following: (1) an admission to candidacy for the MSN degree; (2) an application for the MSN degree; and (3) an admission to candidacy for the EdD degree. Students also must pay existing fees in accordance with Graduate School policies.

If a student is enrolled in the dual-degree program of study and opts out of the EdD degree, the student must complete the "regular" version of the MSN degree program. That is, the student would not be able to earn the degree by completing only the truncated set of requirements for the dual degree.

If a student opts out of one of the degrees and completes the other, then later decides to pursue the remaining degree, the student cannot complete the truncated version of that program’s requirements to earn the degree. The “maximum 6 hours from a previous degree” policy would be in effect for the second degree.

The degree of the EdD for Nurse Educators will be awarded to the student who has met the following requirements:

- GPA of 3.0 or higher
- good standing at the time of graduation
- successful final oral defense of the dissertation
- successful completion of the required coursework and dissertation hours

When EdD requirements are completed, the student will submit an application for the EdD degree and pay existing fees in accordance with Graduate School policies. Links to relevant forms are below:

- Admission to Candidacy for the Master's Degree
- Application for Degree
- Admission to Candidacy for the Doctoral Degree

Admission to Candidacy
Admission to the Graduate School does not imply admission of a student to candidacy for a degree. Admission to candidacy is contingent upon the recommendation of the program faculty and the approval of the graduate dean. A student pursuing Dual degrees is required to apply for admission to candidacy for each degree.

The MSN student must apply for admission to candidacy after 12 semester hours of graduate credit have been earned at The University of Alabama and/or by transfer credit. The EdD student must apply for candidacy after all coursework listed on program of study has been completed, comprehensive exams have been successfully passed, and dissertation prospectus has been successfully defended. Approval will depend on:

- the quality of the applicant's graduate work prior to the time the application is made (see the Degree Requirements in this catalog);
- the removal of any special conditions; and
• the certification of the Assistant Dean of Graduate Programs (ADGP) that the student is well qualified to continue work toward a degree.

Complete an Admission to Candidacy for the Master’s Degree form for the MSN and submit it to the College of Nursing for approval. Complete another Admission to Candidacy for the Doctoral Degree form for the EdD and submit it to the Educational Leadership, Policy & Technology Studies department in the College of Education. The department-approved candidacy forms will be forwarded the Graduate School for final approval.

**Time limit for doctoral study**

Doctoral programs of study may include appropriate coursework that has been earned six years prior to the date of the student’s admission to the doctoral program. All degree requirements must be completed within seven years of the date of the student’s admission to and enrollment in the doctoral program. Additional information is in the Degree Requirements section of this catalog.

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**Curriculum.**

Coursework including dissertation for the MSN/EdD and EdD for Nurse Educators programs can be completed in four years.

**MSN/EdD SAMPLE PROGRAM OF STUDY – subject to revision**

<table>
<thead>
<tr>
<th>Term</th>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall I</td>
<td>BEF 644</td>
<td>Philosophy of Science and Its Relation to Education</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>AIL 600</td>
<td>Integration of Technology in Education and Training</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 501</td>
<td>Theory of Nursing (online)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 503</td>
<td>Informatics in Healthcare</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>11</strong></td>
</tr>
<tr>
<td>Spring I</td>
<td>AEL 667</td>
<td>Multicultural and Social Education for Leadership</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>AIL 602</td>
<td>Electronic Instructional Design</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>BER 540</td>
<td>Statistical Methods in Education</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>9</strong></td>
</tr>
<tr>
<td>Summer I</td>
<td>AIL 604</td>
<td>Distance Technologies</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>BER 640</td>
<td>Quantative Research II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 580</td>
<td>Fiscal Resource Management (online)</td>
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<td></td>
<td><strong>9</strong></td>
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<tr>
<td>Fall II</td>
<td>NUR 620</td>
<td>Curriculum: Theory and Practice</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>BER 631</td>
<td>Inquiry as Interpretation</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 531</td>
<td>Nursing Faculty Roles and Responsibilities</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
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<td><strong>9</strong></td>
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<tr>
<td>Spring II</td>
<td>AHE 603</td>
<td>College and University Teaching</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 520</td>
<td>Evidence-Based Practice (online)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>BEP 541</td>
<td>Learning Theories and Design of Learning Environments</td>
<td>3</td>
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<tr>
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<td></td>
<td></td>
<td><strong>10</strong></td>
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<tr>
<td>Summer II</td>
<td>AEL 681</td>
<td>Ethics and Education</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>BEF 641</td>
<td>Studies in the Social Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 502</td>
<td>Issues in Community-Based Care for Rural Populations (on-line)</td>
<td>2</td>
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<td>AEL 695</td>
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<td>BER 632</td>
<td>Qualitative Research II (or BER 545)</td>
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<td>BEF 644</td>
<td>Philosophy of Science and Its Relation to Education</td>
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<td>AIL 600</td>
<td>Integration of Technology in Education and Training</td>
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<td>Fall I</td>
<td>NUR 531</td>
<td>Nursing Faculty Roles and Responsibilities</td>
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<td>Spring I</td>
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<td>Multicultural and Social Education for Leadership Personnel</td>
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<td>Electronic Instructional Design</td>
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<td></td>
<td>BER 540</td>
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<td>AIL 604</td>
<td>Distance Technologies (online)</td>
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<td>NUR 532</td>
<td>Instructional Media in Nursing Education</td>
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<td>Curriculum: Theory and Practice</td>
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<td>BER 631</td>
<td>Inquiry as Interpretation</td>
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<td><strong>9</strong></td>
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<tr>
<td>Spring II</td>
<td>AHE 603</td>
<td>College and University Teaching</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>NUR 540</td>
<td>Nurse Educator Practicum</td>
<td>6</td>
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<td>BEP 541</td>
<td>Learning Theories and Design of Learning Environments</td>
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<td>Summer II</td>
<td>BEF 641</td>
<td>Studies in the Social Foundations of Education</td>
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<td>Ethics and Education</td>
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<tr>
<td>Fall III</td>
<td>BER 545</td>
<td>Advanced Statistical Methods</td>
<td>3</td>
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<tr>
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<td>BER 632</td>
<td>Qualitative Research II</td>
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<td>Spring III</td>
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<td>Dissertation Research</td>
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</tbody>
</table>

**Total**: 72 credits
These courses are offered at UA. Full curriculum outlines are available through the Capstone College of Nursing administrative offices.

**NUR 501 Theoretical Models for Advanced Nursing Practice with Rural Populations.** Three hours.

This course is intended to advance the role of theory in knowledge development and its relationship to nursing research, practice, and administration. Students will develop critical theoretical analytical skills using selected grand and middle range theories within the discipline of nursing and theoretical work from other disciplines. Specifically, the content will examine the development of nursing theory, including relevant nursing theories such as rural nursing theory, complexity theory, synergy theory, adult learning theories, among others. Theory is understood as essential to nursing science and based on culturally competencies and ethical principles.

**NUR 502 Issues in Community Health Care for Rural Populations.** Two hours. Theory.

In this required course, students will examine issues that affect global community healthcare of rural populations relevant to advanced nursing roles. Content will focus on health of rural dwellers, the provision of health care in rural settings, and what is required for effective interprofessional, evidence-based practice, and education. The advanced practice nurse case manager, clinical nurse leader, or nurse practitioner student will gain an understanding of the development of health promotion and healthcare policy and the sociocultural, economic, political, ethical, and technological forces influencing all levels of healthcare.

**NUR 503 Informatics in Healthcare.** Two Hours.

This required course focuses on the ethical management of data, information, knowledge, and technology to communicate and deliver safe quality healthcare within and across various healthcare settings. This course incorporates the concepts of nursing science, computer science, and information science with information technology tools commonly found in practice. Students are introduced to the nursing informatics specialty and the use of technology to augment nursing care delivery and patient safety.

**NUR 505 Advanced Health Assessment.** Three hours.

The course will assist the graduate nursing student to develop advanced physical exam and health assessment skills and utilize diagnostic reasoning to formulate appropriate differential diagnoses. Students are expected to perform, document, and interpret a comprehensive physical exam and health history, and recommend diagnostic tests to formulate appropriate differential diagnoses.

**NUR 515 Writing for Publications.** Three Hours. Theory.

This elective course is developed for graduate nursing students to develop and refine their skills in writing, editing and preparing manuscripts for publication. The process of writing a manuscript from the initial idea to submission of a publishable manuscript will be included in the course. This course will also emphasize the legal and ethical aspects of authorship and scientific publishing. Students should have mastered basic writing skills, e.g., grammar, syntax and computer skills prior to enrolling in this course.

**NUR 517 Graduate Independent Study.** One to Three Hours.

The independent study option provides an opportunity for students to identify, structure, implement, and evaluate learning experiences consistent with personal learning needs and career plans that are in addition to the current curriculum. The independent study option provides a mechanism for expanding knowledge through self-directed exploration of literature, participation in special projects, clinical practice, or a combination of activities. The Prospectus serves as a contractual agreement between the student and faculty and is
negotiated prior to registration for the study.

**NUR 520 Evidence Based Practice: Roles and Processes.** Four hours. Three Hours Theory and One Clinical.

This course includes the professional role of the nurse case manager or nurse practitioner with rural populations across the lifespan. Emphasis is on the influence of nurse case managers or nurse practitioners on person(s) outcomes at the systems and other levels. Students will assess complex person(s) demands; plan coordinated, multidisciplinary, evidence-based collaborative approaches to person(s) care; and appraise strategies for evaluation of person(s) outcomes.

**NUR 521 Advanced Pharmacology.** Three hours.

This course focuses on identification of appropriate pharmacologic agents for patients with mental health and family practice-related diagnoses across the lifespan, application of pharmacotherapeutic concepts, safe prescribing, and management of clients using therapeutic agents, and providing appropriate patient education. Common medications will be compared and contrasted for indications, efficacy, therapeutic and adverse effects, monitoring parameters, dosing principles, and drug interactions. Legal and ethical implications of pharmacotherapeutics will be addressed, as well as elements of prescription writing.

**NUR 522 Human Relations Management.** Three hours. Two hours Theory, One hour Clinical.

The course focuses on establishing relationships with person(s) and families, group dynamics, team building, leadership and management skills, negotiation, human diversity in health and illness, conflict management, and rural health issues relevant for case management of rural populations and the clinical nurse leader role.

**NUR 524 Legal and Ethical Issues in Healthcare.** Three hours.

This course will explore ethical issues confronted by advanced practice nurses. Basic principles that guide ethical decision-making will be addressed. The course is designed to enhance students’ understanding of value issues and familiarize them with ethical and legal considerations while applying the information to work situations. A variety of topics will be examined including privacy and human rights, women’s health and reproductive rights, children and adolescent issues, whistle blowing policies, nurse anesthesia practice and end-of-life care. Case studies are used and to stimulate thought and class discussion.

**NUR 525 Evidence Based Practice: Roles and Processes for the Clinical Nurse Leader.** Four hours. Three hours Theory, One hour Clinical.

This course describes the professional role of the clinical nurse leader (CNL) with rural populations across the life span. Emphasis is on the influence of the CNL on person(s) outcomes at both the microsystem level. Students will assess complex person(s) demands, plan coordinated, multidisciplinary, evidence-based collaborative approaches to person(s) care, and appraise strategies for evaluation of person(s) outcomes.

**NUR 529/BSC 529 Advanced Pathophysiology.** Three hours.

This course will explore the biologic basis of disease at the cellular, organ and system level with an emphasis on applications for health professionals. It is a required course in the MSN curriculum of the Capstone College of Nursing and may be taken as an elective by graduate biology majors with an interest in health professions.

**NUR 530 Case Management Practicum.** Six hours. Clinical.

This course focuses on the application of the nurse case manager’s functions of assessing, planning, intervening, monitoring, and evaluating health care in rural communities. Emphasis is placed on implementing a coordinated, evidence-based, interdisciplinary, collaborative, integrated, and cost effective approach to health care with rural populations. Web-based
conferences will assist students in the exploration and application of case management issues in self-selected clinical experiences.

**NUR 531 Nursing Faculty Roles and Responsibilities.** Three hours. This online course will provide an introduction to the roles and responsibilities of nursing faculty. This course will prepare students to participate in the processes of designing, implementing, and evaluating a nursing curriculum. This course will include roles and responsibilities of faculty in teaching, scholarship, service, and practice.

**NUR 532 Instructional Media for Nursing Education.** Three hours. This course will provide students with an overview of instructional technology and media that can be used in undergraduate and graduate level instruction in nursing education programs. This course will provide students with skills to begin on site and online instruction. It will explore the use of computers, software, models, simulators, and other instructional media.

**NUR 535 Clinical Immersion Experience.** Six hours. Clinical. This course focuses on the application of the clinical nurse leader’s functions of assessing, planning, intervening, monitoring, and evaluating health care in rural communities. Emphasis is placed on implementing a coordinated, evidence-based, interdisciplinary, collaborative, integrated, and cost effective approach to health care with rural populations. Web-based conferences will assist students in the exploration and application of care management issues in self-selected clinical experiences.

**NUR 540 Nurse Educator Practicum.** Six hours. This online clinical course focuses on the application of the nurse educator's functions of assessing, planning, intervening, monitoring, and evaluating nursing education in the academic environment. Emphasis is placed on implementing a coordinated, interdisciplinary, collaborative, technologically appropriate, and integrated approach to nursing curriculum, design, implementation, and evaluation.

**NUR 580 Fiscal Resource Management.** Three hours. This course addresses principles of fiscal resource management and their application to health care delivery. Concepts include cost analysis, budgeting, contract development, financial aspects of program development and evaluation, cost accounting and tracking for rural populations.

**NUR 581/NHM 580 Research and Statistic for Health Professionals.** Three hours. This course prepares students to evaluate research methods, designs, instruments, and statistics used in health research. Research ethics, outcomes research, and evidence based practice are explored. Students will critique research literature and prepare a research overview relevant to their practice area.

**NUR 585 Mental Health for Rural Families I. Four Hours. Two clinical, Two didactic).**

In this course, the student will learn how to critically appraise theoretical approaches for psychotherapeutic interventions with both individual patients and families in rural areas. This course provides a theoretical basis for advanced practice in Psychiatric Mental Health Nursing. This course will also provide the student with an understanding of the dynamics, epidemiology, and treatment of selected psychopathology, specifically focused on the adult patient. In addition, the role of the PMHNP in the assessment, diagnosis, and treatment of adult patients with mental disorders will be explored. Students must complete 150 clinical rotation hours working with adults and families within the semester in which the course is taken.

**NUR 586 Primary Care for Rural Families I. Four Hours. Two clinical, Two didactic).**

This course provides a theoretical and evidenced based foundation for advanced practice in primary care. The focus is on identifying and managing common acute, episodic and multiple chronic conditions in the adult client. Health promotion and disease prevention strategies for the adult are emphasized. Nurse Practitioner role functions in primary care are explored.
through clinical experiences with diverse rural populations. Students must complete 150 clinical rotation hours working with adults and families within the semester in which the course is taken.

**NUR 587 Mental Health for Rural Families II. Four Hours. Two clinical, Two didactic.**

Provides the student with an understanding of the treatment of psychopathology. The role of the advanced psychiatric mental health nurse in the assessment, diagnosis, and treatment of patients and families in rural settings will also be explored. This course will also examine treatment modalities for advanced practice psychiatric nursing, specifically with children and adolescents. In addition, this course will provide advanced knowledge of psychobiological information in conjunction with the use of psychopharmacological interventions with patients. Students must complete 150 clinical rotation hours working with children and families within the semester in which the course is taken.

**NUR 588 Primary Care for Rural Families II. Four Hours. Two clinical, Two didactic.**

This course provides a theoretical and evidenced based foundation for advanced practice in primary care for women and children. The focus is on identifying and managing common acute, episodic, and multiple chronic conditions experienced by women and children. Health promotion and disease prevention strategies for women and children are emphasized. Nurse Practitioner role functions in primary care are explored through clinical experiences with diverse rural populations. Students must complete 150 clinical rotation hours within the semester in which the course is taken; 102 hours in pediatrics and 48 hours in OB/GYN.

**NUR 590 Mental Health and Primary Care for Rural Families Residency. Six hours. Clinical**

Provide the student with the opportunity to completely immerse in the roles of the Psychiatric Mental Health Nurse Practitioner and Family Nurse Practitioner. Students will engage in the practice, management, and treatment of rural individuals and families experiencing mental health and primary care needs. Students must complete 450 clinical rotation hours in psychiatric mental health (225 hours) and primary care (225 hours).

**NUR 599 Thesis Project.** Three hours. Focuses on the actual implementation of the research process, including the development of the proposal, institutional review board (IRB) approval, data collection, data analysis, and writing the research report.

**NUR 620 (AEL 620) Curriculum Theory and Practice.** Three hours. This is primarily an online, web-based course. It critically examines historical and contemporary discourses necessary to understand curriculum as a synergetic field of study and an area of professional practice. Factors related to organizing curriculum will be considered based on analysis, interpretation, and synthesis of contextual data. Students will determine directions, outcomes, and goals for curriculum and course design. Methods for curriculum evaluation and a dashboard for successful implementation will be emphasized. Students will demonstrate their ability to develop and critique curriculum in the context of instruction through reflection, observation, documentation, and descriptive analysis and to relate ethical, moral, and social justice concerns to curriculum practice.

**NUR 696 Doctoral Seminar.** Three hours. This seminar provides a synthesis experience in which students develop their preliminary prospectus relevant to a selected nursing education research focus. Methods of dissemination including presentations and scholarly report development will be implemented. This course facilitates the process of proposal development.

**NUR 717 DNP Independent Study – Special Topics.** One to four hours. The independent study option provides an opportunity for students to identify, structure, implement, and evaluate learning experiences consistent with personal learning needs and career plans that are in addition to the current curriculum. The independent study option provides a mechanism for expanding knowledge through self-directed exploration of
literature, participation in special projects, faculty-directed clinical practice, or a combination of activities. The Prospectus serves as a contractual agreement between the student and faculty and is negotiated prior to registration for the study.

NUR 731 Philosophical, Theoretical, and Conceptual Foundations for Advanced Practice Nursing. Three hours.

This required core course in the Doctorate of Nursing Practice program provides an understanding of the use of theory and conceptual foundations to guide the complexity of specialty nursing practice at the doctoral level. The content is derived from the philosophical and scientific underpinnings of nursing, natural, and psycho-social sciences.

NUR 732 Design and Statistical Methods for Advanced Nursing Practice. Three hours.

This required course for the Doctorate of Nursing Practice program provides the student with the basis to search, retrieve, and manipulate statistical data. The focus of this course is on quantitative and qualitative methodologies, research design, and data analysis. The content provides essential knowledge for the evaluation of research to guide evidence-based nursing practice at the highest level.

NUR 733 Informatics for Advanced Practice Nursing. Three hours.

This required course focuses on the collection, organization, analysis, and dissemination of information in nursing and health care. Students are introduced to the specialty of nursing informatics, the information system life-cycle, telemedicine, and the use of technology to enhance nursing care delivery and patient safety. Also, students learn how to design, use, and manipulate large and small patient databases for the analysis of patient outcomes.

NUR 734 Advanced Experiential Clinical Course. One to Seven hours.

This course is designed to validate Master's level competencies in clinical and organizational leadership. The course is required for postmaster's DNP students who are graduates of programs with less than 600 clinical hours.

NUR 735 Population Health in Advanced Practice Nursing. Three hours.

This required course prepares the student to implement specialty population-based disease prevention and health promotion activities to achieve national and international goals of improving worldwide health status. The course focuses on a spectrum of issues affecting health, which include emerging infectious diseases, emergency preparedness, disparities in health and healthcare services, and the impact of behavior and lifestyle choices on health.

NUR 736 Application of Best Practices. Three hours.

This required course in the Doctor of Nursing Practice program prepares the student to evaluate interdisciplinary clinical and health systems for best practices and outcomes in a specialty area. Students acquire the knowledge, skills, and tools to support, promote, and implement evidence-based specialty practice in nursing and health care delivery systems to improve health outcomes. Emphasis is on the synthesis, critique, and application of evidence to support quality clinical and organizational practices.

NUR 737 Interdisciplinary Leadership and Role Development for Practice Excellence. Three hours. This course is a required core DNP course that focuses on organizational, systems leadership knowledge, and skills critical to role development in independent and inter and intra-disciplinary practice. Content includes communication, conflict resolution, collaboration and negotiation, leadership, and team functioning to maximize success in the establishment of safe, effective patient-centered care in complex environments.

NUR 738 Scholarly Project Development. Three hours. One hour Theory, Two hours Clinical.

This required course is designed to assist the student in selecting an area of interest within a practice specialization, and in demonstrating professional competencies related to an area of interest. The student will document previously acquired abilities and competencies in a professional portfolio. Students will participate in the seminar to obtain guidance, be involved in discussion, and receive peer suggestions about the portfolio and project plans.
**NUR 739 Scholarly Practice Project.** One to seven hours.  
This is the required capstone clinical course in all advanced practice tracks. The student presents evidence of achievements and competencies in a professional portfolio. The practice residency is completed in a specialty area of the student’s choice. The final project selected and planned by the student and the advisor will be implemented during this course. The student will complete the project, evaluate the outcomes, disseminate the findings, and make a formal scholarly presentation to peers and faculty.

**NUR 740 Health Policy and Politics: Implications in Health Care.** Three hours.  
Health Policy & Politics is a required core in the Doctorate of Nursing Practice program focuses on the basic principles of health policy and the influence of the political process as a systematic approach to health care in the United States and internationally. The course prepares students to assume complex leadership roles in order to advance specialty practice and health. This internet-based course focuses on the unique challenges of engaging and influencing health care policy in the U.S. and internationally. It is designed to develop skills, techniques, and approaches to the critical analysis of health policy proposals, health policies, and related issues from the perspective of consumers, nursing, other health professions, and other stakeholders in policy and public forums. The health policy framework is analyzed from a governmental, institutional, and organizational perspective.
15. SCHOOL OF SOCIAL WORK

The School of Social Work offers educational programs leading to the bachelor of social work, master of social work, and doctor of philosophy degrees. The mission of the school is to solve biopsychosocial problems, improve individual and social conditions, and promote justice and human dignity through teaching, research, and service.

At the master's level, the School prepares students for evidence-informed advanced social work practice and leadership roles. Students are prepared to plan, administer, deliver, and evaluate social services for citizens of the state, region, and nation. The doctor of philosophy program prepares students for research careers in social work. Students learn theory-building, research methods, and critical evaluation of social work policies and practices. The faculty of the School engages in research and professional activities designed to enrich educational programs, improve social conditions, and meet needs of the state, region, and nation.

The School is housed primarily in Little Hall in the central area of the University campus. The building is designed to provide access and mobility for persons with physical disabilities. The Social Work Reading Room, located in the Little Hall, is staffed to provide assistance to students and faculty. Distance learning programs are also available for master's students.
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15.1 MASTER OF SOCIAL WORK PROGRAM
MSW Program Chair: Professor Tyrone C. Cheng, Office: 118 Little Hall

Admission Requirements

Admission requirements of the School of Social Work are consistent with those of the Graduate School (see Admission Criteria section of this catalog). To be considered for admission to the Master of Social Work Program, a person must meet the following requirements prior to enrollment in the MSW Program:

- A bachelor's degree from an accredited institution, including completion of a minimum of four courses in the humanities and/or fine arts, four courses in behavioral science and/or social science, one course in natural science, one course in college mathematics, and two courses in English composition (or the equivalent)
- For regular admission. A grade point average of at least 3.0 overall (based on a 4.0 system) or 3.0 for the last 60 semester hours of undergraduate work based on transcripts from all institutions attended
  For conditional admission. A GPA of at least 2.5 overall (based on a 4.0 system) for undergraduate work, and score at the 40th percentile on the Miller Analogies Test (MAT) or a combined score of 900 or higher on the Graduate Record Exam (GRE) on the general test verbal and quantitative sections.
- A two-part written statement of purpose satisfactory to the MSW admissions committee
- Three letters of recommendation are required by the School of Social Work. The references should be able to objectively speak to your ability for graduate study and potential for social work. Letters from former professors are preferred, and at least one must be from a professor in your undergraduate major. If you have been employed in human services for one or more years, letters will be accepted from an employment supervisor. Letters from family members and friends are not appropriate.
- Reactivated admissions, transfers, and intermitting students will be evaluated according to admission policies and procedures for the academic year in which admission is requested.
- International students must meet the Graduate School's requirements for admission including the equivalent of a four-year bachelor's degree from an accredited institution. A student whose first language is not English must submit an official score report for the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS), or must have earned a degree from an accredited U.S. college or university within the last three years. The minimum score for conditional admission to the Graduate School on the paper-based TOEFL (pBT) is 550 or 79 on the internet-based TOEFL (iBT), and 6.5 on the IELTS.

No academic credit, course waivers, or credit for field practicum shall be granted for life experience or previous work experience.

Admission with Advanced Standing. Students who hold the bachelor of social work degree from an institution accredited by the Council on Social Work Education may be admitted to the MSW program with advanced standing. Advanced-standing students enroll in MSW study for one full summer or spring session and one full academic year. In addition to the satisfaction of all admission requirements of the School, admission with advanced standing also requires a "B" average or better in all professional foundation courses, with no more than one "C" in professional courses and grades of "B" or better in field education courses.

The admissions committee reserves the right to make exceptions to admissions requirements in highly unusual situations and to determine the number of students that can be admitted to each program. In addition, the committee will seek to admit a cohort of students that is diverse in sex, racial and ethnic background, and geographic origin. The committee reserves the right to interview applicants.

Application Procedure. Applicants must provide the following:
• Application for admission to The University of Alabama, including nonrefundable $50 fee for domestic applications and $60 for international applications (payment of the fee must be in the form of a check or money order payable to The University of Alabama or payment online by credit card when applying online)
• Application materials for admission to the Graduate School
• Supplemental application materials or online application for admission to the School of Social Work
• Score report for the Graduate Record Examination or Miller Analogies Test, if required

For an application to be ready for review by the admissions committee of the School of Social Work, the Graduate School file must be completed and forwarded to the School of Social Work. Applicants must specify on the application whether they are applying for the two-year weekday program, the first-year Saturday program, or the advanced-standing program. Applications to the School of Social Work should be completed by February 1 for priority consideration for admission in the summer or fall term and for financial aid awards and by September 1 for the spring advanced-standing program. However, the Graduate School requests that their components of the application be received in their office six weeks prior to the February 1 and September 1 deadlines. Applications may be accepted on a space-available basis until April 1 for admission with advanced standing for summer term or the first-year Saturday program; until July 1 for admission in the fall term; and until November 1 for admission with advanced standing for spring semester.

Additional information is in the Admission Criteria section of this catalog.

Applicants interested in transferring graduate credit to the MSW program from another institution or graduate program must make a formal request after admission to the program. The request is initiated in the Graduate School with the form for Request for Transfer of Graduate Credit. Decisions regarding transfer of graduate credits will be made by the MSW Program Chair and the graduate school after the applicant is admitted.

Application forms and other information may be obtained by writing to The University of Alabama, School of Social Work, Student Services Office, Box 870314, Tuscaloosa, AL 35487-0314. Applicants may also obtain application materials at the School of Social Work website.

Financial Aid
Financial assistance through stipends, grants, and scholarships is available through the School of Social Work. Some stipends are available directly from the School; others are related to traineeships, with specified field education placements and/or curriculum requirements. Stipends and traineeships that may be available include Alabama Department of Human Resources stipends; an Alabama Disabilities Advocacy Program stipend; child welfare traineeships; Sparks Clinics traineeships; Pediatric Pulmonary Health Care traineeships; Taylor Hardin Secure Medical Facility stipends; Bryce State Psychiatric stipends; Alabama Department of Youth Services traineeships; and Veterans Administration traineeships. Additional traineeships become available on a year-by-year basis.

Contact The University of Alabama, School of Social Work, Student Services Office, Box 870314, Tuscaloosa, AL 35487-0314, or telephone (205) 348-5020, for application forms and further information. Students may also contact the UA Office of Student Financial Aid, Box 870162, Tuscaloosa, AL 35487-0162, or telephone (205) 348-6756, for applications for University-sponsored and other financial aid such as federal loans.

Degree Requirements
The master of social work (MSW) degree will be awarded to the student who has met the following requirements:
• Evidence of the capacity to perform in all aspects of the student's educational program at a satisfactory and responsible level, as judged by the faculty, and promise of further professional development (see the Master's Degree Program Student Handbook for further details)
• Students are expected to demonstrate writing proficiency at a graduate level. Writing skills may be evaluated through specialized assignments in foundation or advanced-standing courses, or through a proficiency examination. The student may be required to attend tutorial sessions until proficiency is demonstrated.

**Time Limit Requirement.** Work toward the MSW degree must be completed within four calendar years from the time the first class is taken.

**Admission to Candidacy.** Admission to the Graduate School does not imply admission of a student to candidacy for a degree. Admission to candidacy is contingent upon the recommendation of the student's department and the approval of the graduate dean. The application for **Admission to Candidacy for the Master's Degree** should be filed after 12 semester hours of graduate credit have been earned at The University of Alabama. It must be approved by the time of registration for the semester in which requirements for the degree are completed.

Additional information concerning transfer of credit, time limit, admission to candidacy and all other Graduate School degree requirements is in the **Degree Requirements** section of this catalog.

**MSW Program**

The goal of the master of social work program of the University of Alabama School of Social Work is to educate social workers for advanced practice with an emphasis on public and non-profit social services and on community advocacy. The goal encompasses education for advanced practice in specific types of direct practice and in program assessment and administration, advocacy, and policy and reform roles. The program emphasizes preparation for practice specifically intended to benefit disadvantaged or oppressed people at the state and regional levels, and the program provides opportunities for students to prepare for practice based on this commitment at the national and international levels.

Building on the professional social work foundation, and within a focused area of study, the program prepares graduates

• for advanced social work practice in an area of concentration
• who will provide leadership in planning, administering, delivering, and evaluating social services
• who will advocate for social causes and justice, and work on reform efforts
• who will demonstrate a commitment to practice and service to benefit poor, oppressed, and other socially disadvantaged people, and to work toward the elimination of poverty, oppression, and discrimination
• who value human diversity and display sensitivity to the uniqueness, commonalities, and richness of cultures and their constituents
• who are committed to the values and ethics of social work
• who engage in a continuous process of professional development through systematic inquiry, analysis, reflection, and participation in organized professional educational opportunities
• who will contribute to the development of the profession of social work within the state, region, and nation and/or international communities

**Curriculum.** The MSW program is fully accredited by the Council on Social Work Education. The curriculum follows the curriculum policy requirements of the Council on Social Work
Education and provides a balanced, integrated approach that includes a professional foundation and a choice of concentrations. The professional foundation curriculum taken the first year consists of coursework in the following:

- **Social work practice.** This area of the curriculum is designed to provide practice knowledge and competencies in working with individuals, groups, families, communities, and organizations.
- **Human behavior and the social environment.** This area of the curriculum helps the student to understand the whole person and the process of growth, change, adaptation, social functioning, and dysfunctioning in the environmental context, including family, groups, formal organizations, and communities. Courses in this area cover prenatal stages through the process of aging.
- **Social welfare policy and services.** This area of the curriculum is designed to help the student identify, appraise, analyze, and understand social change in its dynamic perspectives; the role and responsibility of social work as a profession in influencing social policy; and the delivery of service to individuals and society.
- **Research methods.** This area of the curriculum is designed to help the student understand social work and related research and the use of research for the improvement of services to individuals, groups, organizations, and communities.
- **Field education.** This area of the curriculum provides opportunities for students to integrate and apply knowledge, skills, and values in a social work practice context.

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**MSW Curriculum Themes**

The MSW program emphasizes the following five themes underpinning the foundation and the concentration year objectives:

- **Life Course Perspective:** Social workers understand that the growth and development of individuals, families, groups, organizations and communities are influenced by a range of psychological, social, historical, political and economic factors. The interaction of these factors with life events and life transitions contribute to the subsequent outcomes. This theme also serves as the conceptual framework for the entire MSW curriculum.
- **Valuing Diversity:** Social workers value and work respectfully with people who are different from themselves.
- **Critical and Reflective Thinking:** Critical and reflective thinking that challenges assumptions, and that is based on evidence to arrive at creative solutions, is the basis for competent social work practice.
- **Evidence-Based Practice:** Social workers favor interventions with demonstrated effectiveness. They are prepared to carefully evaluate practice and program outcomes.
- **Services to the Poor and Underserved:** Alabama’s poor and underserved receive social services primarily from public and non-profit social service agencies. Social workers must be prepared to practice in these contexts and to challenge social injustice.

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**MSW Program Foundation Objectives**

Foundation Year MSW students will demonstrate the ability to:

- Apply critical thinking skills within the context of professional social work practice.
- Understand the value base of the profession and its ethical standards and principles, and practice accordingly.
- Practice without discrimination and with respect, knowledge, and skills related to clients’ age, class, color, culture, disability, ethnicity, family structure, gender, marital status, national origin, race religion, sex, and sexual orientation.
- Understand the forms and mechanisms of oppression and discrimination and apply strategies of advocacy and social change that advance social and economic justice.
- Understand and interpret the history of the social work profession and its contemporary structures and issues.
• Apply the knowledge and skills of generalist social work perspective to practice with systems of all sizes.
• Use theoretical frameworks supported by empirical evidence to understand individual development and behavior across the life span and the interactions among individuals and between individual and families, groups, organizations, and communities.
• Analyze, formulate, and influence social policies.
• Evaluate research studies, apply research findings to practice, and evaluate their own practice interventions.
• Use communications skills differentially across client populations, colleagues, and communities.
• Use supervision and consultation appropriate to social work practice.
• Function within the structure of organizations and service delivery systems and seek necessary organizational change.

Concentration Objectives
In professional social work intervention with children, youth, and their families, or adults and their families, students will demonstrate:

• The ability to effectively apply selected models and methods of advanced social work practice, consistent with social work values and ethics, with an emphasis in public and non-profit social services.
• The ability to use reflectively the theoretical approaches and knowledge bases underlying their practice with particular attention to the life course perspective.
• The ability to evaluate their own practice.
• The ability to analyze the impact of social welfare policies on clients and practice situations.
• The ability to practice in ways that are culturally and gender appropriate with low income persons and with those who have experienced social and economic injustice.
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15.2 PROGRAM REQUIREMENTS

First-year Foundation Core Requirements. The professional foundation year of core courses prepares students to use a range of social work knowledge, methods, and skills to facilitate change within a continuum of client systems, from individual to societal. Field education in the foundation year is generic in focus, exposing students to a wide range of clients and programs.

First-Year Required Courses

Note: The timing of first-year foundation courses in may vary slightly depending on the program, but the foundation courses must be completed before second year (concentration year) courses are undertaken.

**Fall Semester**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>SW 500</td>
<td>Social Welfare Policy — History, Problems, Programs, and Analysis</td>
<td>3</td>
</tr>
<tr>
<td>SW 510</td>
<td>Human Behavior and Social Environments I</td>
<td>3</td>
</tr>
<tr>
<td>SW 540</td>
<td>Social Work Practice with Individuals and Families</td>
<td>3</td>
</tr>
<tr>
<td>SW 541</td>
<td>Social Work Practice with Groups</td>
<td>3</td>
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<tr>
<td>SW 542</td>
<td>Social Work Practice with Communities and Organizations</td>
<td>3</td>
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**Total semester hours** 15

**Spring Semester**

<table>
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<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>SW 511</td>
<td>Human Behavior and Social Environments II</td>
<td>2</td>
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<tr>
<td>SW 520</td>
<td>Research Methods for Social Work Practice</td>
<td>3</td>
</tr>
<tr>
<td>SW 534</td>
<td>Integrative Seminar I</td>
<td>1</td>
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<tr>
<td>SW 590</td>
<td>Field Education I</td>
<td>9</td>
</tr>
</tbody>
</table>

**Total semester hours** 15

Two Year Programs. The School offers a traditional weekday program in Tuscaloosa, a Saturday program in Tuscaloosa that provides students the opportunity to complete first-year classroom coursework on Saturdays, and a primarily online program. The Saturday program offers first-year (foundation-year) courses each year in Tuscaloosa. The primarily online program offers most courses in an online format, with face-to-face practice skills labs required for some classes. The practice labs are offered on weekends in regionally convenient locations in Alabama. The second-year (concentration year) courses are not available on Saturdays. All students are required to complete a 500-clock-hour field education experience in the spring. For all programs, at least 16 hours per week of field education experience must be completed during customary work days and hours (M-F, 8:00am to 6:00pm).

Advanced-Standing Program. Students admitted with advanced standing must complete 12 hours of coursework preceding the second year (concentration year) of the MSW program.

**Required Courses—Advanced-Standing Program**

(Spring or Summer Prior to Second Year of MSW Program)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW 576</td>
<td>Intermediate Social Work Research</td>
<td>3</td>
</tr>
<tr>
<td>SW 577</td>
<td>Components of Human Development and Social Systems</td>
<td>3</td>
</tr>
<tr>
<td>SW 579</td>
<td>Components of Social Work Practice</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total semester hours** 12
Hong Kong Courses. The School of Social Work, under contract with Hong Kong Shue Yan University, allows students to complete the first year of the master's degree program in Hong Kong. All standards and policies of the School of Social Work and the Graduate School, including admissions requirements, apply to students taking these courses.

Challenge Examinations. The master of social work program permits admitted MSW students to demonstrate a mastery of specific course content areas by passing a challenge examination. Challenges are permitted in the areas of policy, research, and human behavior. Thus, students in the advanced program may request to challenge SW 576 Intermediate Social Work Research, SW 577 Components of Human Development and Social Systems, and/or SW 578 Social Welfare Policies and Delivery Systems, Social Problems, and the History of Social Welfare. Students in either the Saturday program or the weekday program may request to challenge SW 500 Social Welfare Policy: History, Problems, Programs, and Analysis; SW 510 Human Behavior and Social Environment; and/or SW 520 Research Methods for Social Work Practice. A student who successfully challenges a course will be permitted to take a substitute course in lieu of the required foundation course. The degree-hour requirements remain the same.

Field Education Placement Procedures. The major objective in the placement process is to match the student with the field education setting that offers the best potential for promoting the student's professional development. The School is responsive to personal factors related to location of placements and specific agencies, but it cannot assure an assignment tailored to personal situations. In accepting admission to the School and registering in the MSW program, the student has agreed to accept field education placements assigned by the School of Social Work.

Students who are employees of organizations that meet the School's criteria for field education agencies and that agree to the School's requirements may apply to the Field Education Coordinator to arrange a placement with that agency as one of the required field education experiences.

Field education placements are available in the Tuscaloosa area and throughout the state. Students are responsible for arranging transportation and paying any expenses related to field education. Students may not enroll in field education unless they have completed the required courses for the year in which they are enrolled, or unless they are concurrently enrolled in those courses. A student who has a grade of "I" on his or her record will not be allowed to enroll in field education.

A student who is unable to meet minimum standards in field education may be dropped from field education at any time. A student dropped from field education is also discontinued from other courses requiring concurrent enrollment in field education.

Washington, D.C., Placements. The MSW program provides the opportunity for students to complete the second-year field education requirement and other specific program requirements in Washington, D.C. These placements offer special opportunities to obtain field education experience not ordinarily available in Alabama.

Second-Year Concentrations. The curriculum stresses specialized knowledge; the ability to understand complex theories, methods, and models of social work practice; and the ability to apply knowledge and skills differentially in the process of selecting alternatives in all levels of practice. The purpose of the second, or concentration, year of the social work curriculum is the preparation of social workers for advanced practice in one of two concentrations: Social Work with Children Adolescents, and their Families or Social Work with Adults and their Families. An emphasis on Program Planning and Administration (PAA) is available with either of the concentrations. The concentration year is built on a liberal arts perspective and professional foundation content, with particular emphasis on populations at risk.

Each concentration includes two required courses, the opportunity for three electives (which can be courses from other concentrations), and a field education placement related to the concentration. Two other courses are required during the second or concentration year: SW
525 Evaluation Research, and SW 501 Social Welfare Policy: Advanced Policy Analysis. Students have the opportunity, in collaboration with their academic advisors and depending on course availability, to tailor their concentrations to reflect their own preferences. An emphasis in Program and Agency Administration in either concentration requires that students complete (a) SW 506 Social Service Planning and Program Development, (b) SW 536 Social Service Program and Agency Administration, and (c) a field education placement that provides an opportunity to implement the knowledge gained in these two courses. The School reserves the right to alter the concentration requirements as necessary.

Students are required to take the following concentration year courses:

**Required Courses for ALL Concentrations**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW 525 Evaluation Research</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total semester hours</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

**Required Courses—Social Work with Children, Adolescents, and their Families**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW 564 Models and Methods of Social Work Practice with Children and Adolescents in Mental Health</td>
<td>3</td>
</tr>
<tr>
<td>SW 565 Models and Methods of Social Work Practice in Child Welfare and Family Services</td>
<td>3</td>
</tr>
<tr>
<td>SW 595 Field Education II Social Work Practice with Children, Adolescents and, and their Families</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total semester hours</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

**Required Courses—Social Work with Adults and their Families**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW 532 Models and Methods of Social Work Practice with Adults in Mental Health</td>
<td>3</td>
</tr>
<tr>
<td>SW 533 Models and Methods of Gerontological Social Work Practice</td>
<td>3</td>
</tr>
<tr>
<td>SW 595 Field Education II Social Work Practice with Adults and their Families</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total semester hours</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

**Electives:**

All students must complete 9 hours of electives. Electives may be taken at any time after admission into the program (i.e., interim term, summer, fall, or spring semesters), if prerequisites are met. Electives may include, if openings exist, required courses from the other concentration. If an emphasis in Program and Agency Administration is desired, two of the three electives must include SW 506 Social Service Planning and Program Development and SW 536 Social Service Program and Agency Administration. Electives may also be taken outside of the School of Social Work with advisor approval. Students are encouraged to consult their advisors to plan their academic programs.
15.2.1 MSW/MPH DUAL-DEGREE PROGRAM

The University of Alabama School of Social Work in Tuscaloosa and the University of Alabama at Birmingham School of Public Health's Department of Maternal and Child Health jointly offer an MSW/MPH dual-degree program designed for people with career goals in community-oriented health services for families and children. A program of study leading to both degrees requires 84 semester hours of coursework. Contact the Chairperson, MSW Program, School of Social Work, The University of Alabama, Box 870314, Tuscaloosa, AL 35487-0314; telephone (205) 348-9902 for more information.
The goal is to offer comprehensive preparation to individuals interested in becoming leaders in their communities, their state, or the nation, as well as leaders in promoting and enhancing social justice and individual well-being, through interventions, advocacy, organizational management, and public policy. Students acquire knowledge of social work and law strategies that can improve the lives of individuals and groups, by understanding forensic social work, the justice system, domestic violence, child protection, human rights, and more.

Separate admission to each program is required. Admission requirements for the dual-enrollment program are exactly the same as those currently established for the MSW program separately and the JD program separately. Also, all normal prerequisites for both programs must be met.

Completion Requirements

UA’s Advanced-Standing MSW program requires 42 hours of course work; the 2-year MSW program requires 60 hours. Students in the dual-enrollment MSW/JD complete in the Law School the 9 hours of electives currently required for the MSW degree (and currently specified as “MSW electives”).

The JD program requires at least 90 hours of course work, of which 6 hours may be fulfilled with approved courses offered outside the Law School. The JD is a cohort-based program completed over 3–4 years. Dually enrolled MSW/JD students will be required to complete 9 hours of MSW courses as part of the 90 hours constituting study for the JD.

In all, then, the dual-enrollment program requires 114 credit hours for students admitted with advanced standing by the MSW Admission Committee, or 132 credit hours for students admitted without advanced standing.

Transfer of Credit

Students observe all current rules governing transfer of academic credit, as outlined in both the Graduate Catalog and the Law Student Handbook. In the dual-enrollment program, transfer of credit for the required social work courses will be allowed, subject to current policies of the Graduate School and School of Social Work.

Students in the dual MSW/JD program follow the first-year curriculum prescribed by the Law School. The dual degree program effectively begins after the first year of the JD curriculum is completed. Dually enrolled MSW/JD students work with advisors from both programs prior to their third semester to assure that an appropriate Plan of Study is developed and progress is made to satisfy the requirements of both degrees.

Time Limit

We expect each enrolled student to complete the dual-enrollment program in 3.5 to 4.5 years. All requirements for the MSW degree and the JD degree must be completed during the six years (18 fall, spring, and summer semesters) immediately preceding the date on which the degree is to be awarded. There is no provision for an extension of the time limit beyond 6 years.

Withdrawal from One of the Programs

A student electing to withdraw from the dual-enrollment MSW/JD program in order to complete one degree but not the other will be required to complete the typical, full program requirements for the remaining degree in order to graduate.
Both Degrees Conferred in Same Commencement

Both degrees will be conferred during a single commencement exercise, once all degree requirements have been met for both programs. Neither degree will be granted until both degrees are earned, except in cases in which a student formally withdraws from the dual-enrollment program and continues on to completion of all of the normal requirements for the remaining program.
15.2.3 CONCURRENT ENROLLMENT IN THE MSW AND PhD DEGREE PROGRAMS

The University of Alabama School of Social Work offers an MSW/PhD concurrent program for individuals who have strong interests in research careers in social work. These individuals may be admitted simultaneously to the MSW and PhD programs and work on both degrees concurrently. Those admitted to the concurrent program will complete all current requirements for the PhD degree. Specific required PhD coursework will be applied to specific MSW degree requirements, reducing the number of semester hours required for the MSW and PhD degrees by 18 hours. The MSW degree will be awarded when all requirements for the MSW completed, and the student will continue to work on the PhD requirements. Successful applicants must meet the minimum admission requirements of the Graduate School and The School of Social Work MSW and PhD Programs.
15.3 MSW COURSE DESCRIPTIONS (SW)

Courses are subject to modification without advance notice.

Admission to 500-level courses is limited to graduate social work students only, unless consent of the instructor and the assistant dean is obtained. See the School of Social Work Master’s Degree Program Student Handbook for additional course eligibility requirements.

Prerequisite: Admission to MSW program or permission of MSW program chair and instructor.
Overview of the evolution of social welfare policies and services, and of how social problems affect societal groups. Includes examination of the tools and approaches that social workers might use in analysis and policy formulation.

Prerequisite: SW 500 or SW 578.
The focus of this course is on social welfare policy analysis with particular emphasis on the influence of economic and political issues. This course emphasizes comparative research at both state and national levels.

SW 505 Reminiscence and Life Review in Late Adulthood. Three hours.
The focus of this course is on evidence-based practice models and methods of conducting and utilizing the therapeutic interventions of reminiscence and life review that grew out of the intersection of Erik Erikson's conceptualization of later life and Robert Butler's interpretation of successful aging. The course will review the theoretical background of these two interventions, address specific target groups including depressed and cognitively impaired older persons, and older people who are experiencing a life transition. Life review and reminiscence will be discussed as a normal, developmental task as well as a responsibility in caring for an older adult. Specific methods associated with life review and reminiscence will be reviewed to include a life story book, structured reminiscence, positive core memories, life review and experiencing, and a life challenges interview. Emerging issues in reminiscence and life review will be discussed to include dosage level, procedures for integrating these approaches with other techniques (e.g., cognitive behavioral therapy), negative outcomes and cultural and tailoring interventions (the provision of culturally and gender sensitive interventions, elders who have experienced prejudice, discrimination, and social injustice).

SW 506 Social Service Planning and Program Development. Three hours.
Prerequisite: MSW concentration-year standing or permission of MSW program chair and instructor.
Application and analysis of theory applicable to the field of planning and developing social services and programs.

SW 510 Human Behavior and Social Environments I. Three hours.
Prerequisite: With special permission of the MSW program chair, graduate students outside the School of Social Work may take this course.
Critical concepts, theories, and research related to human bio-psychosocial development across the life span; human development and behavior in the environmental contexts of family, groups, organizations, and communities; and the impact of human diversity on human development and behavior. This course is part of a two course sequence and focuses on earlier stages of human development from conception through adolescence.

SW 511 Human Behavior and Social Environments II. Two hours.
Prerequisites: SW 510 or permission of MSW program chair.
This course introduces students to an overarching conceptual framework and selected theories for understanding human behavior across the life course. This course is part of a two-course sequence and focuses on the later stages of human development from young adulthood to advanced old age.
SW 513 Models and Methods of Social Work Practice in Health Care. Three hours. Prerequisite: MSW concentration-year or advanced standing. This course prepares students for advanced social work practice in health care settings. Using the Life Course Perspective, health and health care issues relevant to health care social work are addressed.

SW 514 Chemical Dependency. Three hours. Prerequisite: Admission to MSW program or permission of MSW program chair and instructor. Introduction to major theories of addiction, state and federal policies regarding drug control, and the effects of substance abuse.

SW 515 Psychopathology. Three hours. Prerequisite: Admission to MSW program or permission of MSW program chair and instructor. Presents diagnostic criteria used in recognition and treatment of mental disorders, and theory and research on the etiology of these disorders.

SW 520 Research Methods for Social Work Practice. Three hours. Prerequisite: Admission to MSW program or permission of MSW program chair and instructor. First of a two-course sequence. This course focuses on facilitating the student’s ability to critically consume both qualitative and quantitative research.

SW 522 Social Work Ethics. Three hours. This course will help students develop the knowledge base necessary to identify social work values, ethics and the relationship between the two to social work practice with children, youth, adults and their families. This course is designed to help students develop a better understanding of ethical issues and dilemmas they will experience in their practice and the skills needed to resolve ethical dilemmas and ensure consistent value driven ethical practice in the micro and macro aspects of social work practice. The course will assist students in developing a professional identity within the context of personal vs. professional values and beliefs. Students will acquire the skills needed to engage in professional behavior with clients and colleagues in a variety of situations. A major focus is on identifying legal, ethical and advocacy issues and interventions with low-income populations and those that have experienced social and economic injustice.

SW 523 Family Preservation. Three hours. Prerequisite: SW 565 pre- or corequisite, or permission of MSW program chair and instructor. Overview of family preservation theory and practice. Students demonstrate skills with high risk children and families in their home setting.

SW 524 Family Violence. Three hours. Prerequisite: Admission to MSW program or permission of MSW program chair and instructor. Students learn about various forms of family violence across the lifespan, selected theories and their application in prevention and intervention.

SW 525 Evaluation Research. Three hours. Prerequisite: Graduate standing; completion of SW 520 or SW 576 (or equivalent). Students learn to design a practice or program evaluation project, demonstrating the link between designing and conducting research and the practice of social work.

SW 526 "Isms" and Advocacy in Social Work. Three hours. Prerequisite: Admission to MSW program or permission of MSW program chair and instructor. Introduction to various forms of oppression, social injustice and advocacy to prevent and intervene.

SW 527 School-based Social Work Practice. Three hours. Prerequisite: Admission to MSW program or permission of MSW program chair and instructor. This course prepares students for school-based social work practice. Advocacy, program design, and evaluation are also taught.

SW 528 Spirituality in Social Work Practice. Three hours. Prerequisite: MSW concentration-year standing or permission of MSW program chair and
instructor.
Provides an overview of major issues relevant to spiritually sensitive social work practice with emphasis on the role of spirituality in interventions.

**SW 529 Advanced Clinical Social Work Practice.** Three hours.
Prerequisite: MSW concentration-year standing or permission of MSW program chair and instructor.
The course provides advanced level information about the application of selected theoretical frameworks and models of practice, assessment strategies and techniques, the formulation of treatment plans, practice interventions, and practice evaluation.

**SW 532 Models and Methods of Social Work Practice with Adults in Mental Health.**
Three hours.
Prerequisite: Concentration-year standing in the MSW program.
This course emphasizes evidence-based practice models and methods of intervention for effective social work practice with adults experiencing mental health problems.

**SW 533 Models and Methods of Gerontological Social Work Practice.** Three hours.
Prerequisite: MSW concentration-year standing or permission of MSW program chair and instructor.
Focuses on evidence-based practice models and methods of social work intervention with older persons and their families.

**SW 534 Integrative Seminar.** One hour.
Corequisite: SW 590.
Integration of foundation course content and field education.

**SW 536 Social Service Program and Agency Administration.** Three hours.
Prerequisite: MSW concentration-year standing or permission of MSW program chair and instructor.
Students learn selected theoretical frameworks and apply the knowledge and skills for administration of social service programs and agencies.

**SW 537 Forensic Social Work.** Three hours.
Prerequisite: MSW concentration-year standing or permission of MSW program chair and instructor.
This course is designed to provide students with the knowledge and critical thinking skills necessary for specialized practice in the area of forensic social work.

**SW 540 Social Work Practice with Individuals and Families.** Three hours.
Prerequisites or corequisites: SW 510 and enrollment in the MSW program.
Theory and practice of social work with individuals and families are explored.

**SW 541 Social Work Practice with Groups.** Three hours.
Prerequisites or corequisites: SW 510 and enrollment in the MSW program.
The course provides a framework for systematic study of components and issues involved in the practice of social work with groups.

**SW 542 Social Work Practice with Communities and Organizations.** Three hours.
Prerequisite or corequisite: SW 510 and enrollment in the MSW Program.
Exploration of theories of social work practice for intervention at the community level, including selected macro-models of practice, and community practice within human-service organizations.

**SW 549 Crisis Intervention.** Three hours.
Prerequisite: MSW concentration year standing or permission of MSW program chair and instructor. Focuses on treatment theories and models of intervention that provide a focused approach to the client in crisis.

**SW 553 Independent Study.** Three hours.
Prerequisite: Permission of the instructor, advisor, and the MSW program chairperson and
associate dean. Proposals must be completely approved by the last day of class of the semester prior to the semester in which the course is to be taken. Independent learning experience, under faculty direction, with a contract for an outcome such as a publishable research document.

**SW 557 Selected Topics in Social Work Practice.** Variable credit. Prerequisite: Enrollment in MSW program or permission of MSW program chair and instructor. Intensive study of an area of or specific approach to social work practice. Topics vary from semester to semester. May be repeated.

**SW 559 Pediatric Pulmonary Care: An Interdisciplinary Approach.** Three hours. Prerequisite: Enrollment in MSW program and acceptance as a pediatric pulmonary trainee or permission of MSW program chair and instructor. Introduces social work students to pediatric pulmonary diseases and to research literature in this area of health care. Offered according to demand.

**SW 564 Models and Methods of Social Work Practice with Children and Adolescents in Mental Health.** Three hours. Prerequisite: Concentration year standing in the MSW program. This course emphasizes evidence-based practice models and methods of intervention for effective social work practice with children, adolescents, and their families experiencing mental health problems.

**SW 565 Models and Methods of Social Work Practice in Child Welfare and Family Services.** Three hours. Prerequisite: Admission to MSW program or permission of MSW program chair and instructor. This course emphasizes evidence-based practice models of intervention for effective social work practice in child welfare and family services settings.

**SW 576 Intermediate Social Work Research.** Three hours. Prerequisite: Admission to MSW advanced-standing program or permission of MSW program chair and instructor. Required for advanced standing students. Prepares the student to engage in research at a level of sophistication and complexity appropriate for entry in the second-year research course.

**SW 577 Components of Human Development and Social Systems.** Three hours. Prerequisite: Admission to MSW advanced-standing program or permission of MSW program chair and instructor. Required for advanced standing students. Provides students with instruction in the major psychological and sociological theories of human behavior that support and enhance social work practice.


**SW 579 Components of Social Work Practice.** Three hours. Prerequisite: Admission to advanced standing in social work. Required for advanced standing students. Designed to provide a foundation for social work practice with individuals, families, groups, and communities, in preparation for second-year practice courses.

**SW 580 Aging in a Social Context.** Three hours. Prerequisite: Admission to MSW program or permission of MSW program chair and instructor. Examines aging in social, economic, and political contexts. Special attention is given to various social theories of aging; needs and problems of disadvantaged subpopulations of older people; and social policies and programs affecting older people.

[http://graduate.ua.edu/catalog/26600.html](http://graduate.ua.edu/catalog/26600.html)
**SW 585 Geriatric Care Management.** Three hours.
The primary purpose of this course is to provide social workers interested in geriatric care management with the skills and knowledge needed to help prepare and empower family members in meeting the long term care needs of older adults and people with disabilities. The instructor for this course will offer evidenced based information about how to conduct a care giving assessment and intervention with special attention to the complexities of the current long term care industry in the U.S. and to the many resources available to help care givers at the local and national level. This course provides specialized, yet practical information designed to help families successfully meet the challenges of filial responsibility and other forms of care giving associated with disability. The specific tasks of care giving are organized into four categories: medical; legal-insurance-financial; family-social; and spiritual-emotional. Each task reflects a real life challenge that potentially comprises an important aspect of a care recipient's long term care plan. The model of care giving used in this course underscores the importance of timely professional consultation and the supreme value of proactive preparation that values and honors the preferences of aging parents and family members with disabilities.

**SW 589 Social Work Practice in End-of-Life Care.** Three hours.
Prerequisite: Concentration-year standing or permission of MSW program chair and instructor. This course provides students with an understanding of the practical and emotional aspects of providing social work services to people who are dying and their families.

**SW 590 Field Education I.** Nine hours.
Prerequisites: SW 500, SW 510, SW 540.
Pre- or Co-requisite: SW 511, SW 534, SW 541, and SW 542.
Planned field experience in human service programs. The student is typically required to be in the field four days and in class one day each week, for a 16-week period. The objective of SW 590 is broad experience in social work practice.

**SW 595 Field Education II.** Nine hours.
Prerequisite: Completion of SW 590, concentration courses, and SW 525 as pre- or co-requisite.
Placements are individualized according to each student's concentration, career interest, and educational needs. The time requirements are the same as for SW 590.

**FIELD EDUCATION AGENCIES**
The following list is provided for example only, and is subject to change.

**Tuscaloosa Area**
Alabama Disabilities Advocacy Program
Brewer-Porch Children's Center
Children's Rehabilitation Service
Community Service Programs of West Alabama
Counseling Center, The University of Alabama
DCH Northport
DCH Regional Medical Center
Department of Human Resources
Department of Public Health
Family Counseling Service of Tuscaloosa County
Family Options
Gambr?! Hospice of West Alabama
Mary Starke Harper Geriatric Psychiatry center
Northport Hospital-DCH Office of Public Defender, Tuscaloosa County Courthouse
Taylor-Hardin Secure Medical Facility
Temporary Emergency Services
Tuscaloosa City Schools
Tuscaloosa County Schools
Tuscaloosa Housing Authority Tuscaloosa’s One Place, A Family Resource Center
University Medical Center
Veterans Affairs Medical Center
W. D. Partlow Developmental Center
**Birmingham Area**
Aids Alabama  
Alabama AEGIS, Inc.  
Area Agency on Aging  
Baptist Medical Center Princeton  
Birmingham Aids Outreach  
Catholic Family Services  
Children's Aid Society  
Children's Hospital  
Collat Jewish Family Services  
Cooper Green Hospital  
Department of Youth Services, Chalkville  
Department of Human Resources  
Gateway  
Glenwood  
Hill Crest Hospital  
Jefferson, Blount, and Shelby Mental Health Authority  
Jefferson County Housing Authority  
Lifeline Village  
Office of Senior Citizens  
Pathways  
Prescott House  
Spain Rehabilitation Center  
Sparks Clinic, UAB Civitan Center  
UAB, Department of Psychiatry  
UAB Hospital  
UAB, 1917 Clinic  
United Way of Central Alabama, Inc.  
Veterans Affairs Medical Center  
YWCA

**Gadsden Area**
Alabama Baptist Children’s Home  
Big Brothers/Big Sisters  
Calhoun-Cleburne Mental Health Center, Anniston  
Catholic Social Services, Huntsville  
Cherokee-Etowah-DeKalb Mental Health Center  
Cheaha Mental Health Center  
Corporate University Huntsville Hospital  
Department of Human Resources  
Department of Public Health  
Family Options  
FIRST Family Resource Center  
Huntsville Day Spring Counseling Center  
Mt. View Hospital  
Mt. View Family Services  
Parkway Medical Center  
Presbyterian Home for Children  
The Bridge

**Mobile Area**
Alabama Baptist Children’s Home  
Area Agency on Aging  
Baldwin County Mental Health Center  
Covenant Hospice  
Department of Human Resources  
FIT Homes  
Franklin Primary Health Center  
EAP Lifestyle Management  
Mobile Mental Health Center
New Way Out Corporation
Providence Hospital
St. Mary’s Home
Thomas Hospital
USA Medical Center
USA Women’s and Children’s Hospital
United Methodist Children’s Home
Wilmer Hall

**Montgomery Area**
AGAPE of Central Alabama
Baptist Medical Center
Barbour County Juvenile Court
Central Alabama Aging Consortium
Children’s Rehabilitation Services
Dallas County Juvenile Probation Department
Department of Human Services
Department of Youth Services, Mt. Meigs
Group Homes for Children
Lee County Development Center
Montgomery Area Mental Health Authority
Montgomery County Department of Human Resources
Russell Medical Center
Safety Net Academy
Seraaj Family Homes
Southeast Alabama Medical Center
United Methodist Children’s Home
Veteran’s Affairs Medical Center, Tuskegee

**Washington, D.C.**
Administration on Aging: HHS
Administration for Children and Families, U.S. Department of Health and Human Services
American Healthcare Association
Bethesda Baptist House for Children & Families
Children’s National Medical Center
Child Welfare League of America
Commission on Mental Health Services
D.C. Child and Family Services
Downtown Clusters Day Care
Georgetown University Hospital
J.B. Johnson Nursing Home
National Association of Social Workers
National Disability Rights Network
National Institutes of Health
Office of Refugee Resettlement and Human Trafficking
St. Elizabeth Hospital
The Hospital for Sick Children Pediatric Center
U.S. Congress: House and Senate
U.S. Soldiers and Airmen’s House
Walter Reed Army Medical Center
Washington Hospital Center
Washington Urban League
Whitman-Walker Clinic
Women’s Collective

**Hong Kong**
Tung Wah Group of Hospitals
Ko Wong Mo Ching Memorial
Hong Kong Family Welfare Society
North Point Integrated Family Service Center

http://graduate.ua.edu/catalog/26600.html
The Comfort Care Concern Group
Hong Kong YWCA Women's Affairs Department
Admission Requirements

Graduate School Admission Requirements. The Graduate School determines eligibility for regular or conditional admission, primarily on the basis of standardized test scores and previous academic record. Successful applicants must meet the minimum admission requirements of the Graduate School, which follow.

- a grade point average (GPA) of at least 3.0 on a 4.0 scale (overall) or a GPA of at least 3.0 for the last 60 hours of the previous degree program, or 3.0 for a completed graduate degree program.
- an acceptable score on an appropriate entrance examination as set by the department or school.

An applicant may be considered for conditional admission if he or she has a GPA of 2.5 overall and an acceptable score on the appropriate admission examination, or a GPA of 3.0 and less than the minimum score on the admission examination.

Additional information is in the Admission Criteria section of this catalog.

PhD Program Admission Requirements. Once the application is complete, it is sent to the PhD program office in the School of Social Work for evaluation. Listed below are the requirements for unconditional admission to the social work PhD program.

- a minimum composite score of 1000 on the Graduate Record Examination (GRE) general test verbal and quantitative sections. In addition, the faculty will consider the score on the analytical writing section of the GRE together with the essay submitted to the School of Social Work as part of the application to the PhD program. Applicants from non-English-speaking countries must submit evidence of English language proficiency by means of a Test of English as a Foreign Language (TOEFL) score of at least 550, or 79 on the internet-based TOEFL, or a score of at least 6.5 on the International English Language Testing System (IELTS).
- letters from three references, one of whom must be an experienced social worker with firsthand knowledge of the applicant's capability and one of whom must be a former university instructor who has personal knowledge of the applicant's intellectual and scholarly abilities. If the applicant has earned the MSW degree, at least one letter must be from a former instructor in the applicant's MSW program.
- a statement of purpose indicating the reasons the applicant wishes to pursue a doctoral degree in social work and indicating the applicant's research interests.
- evidence of scholarly ability, supported by evidence the applicant supplies (e.g., a paper published in a journal or presented at a conference or workshop, a design of a service program or a research proposal, and/or a course syllabus written by the applicant).

An Admissions Committee composed of members of the PhD Program Committee reviews application materials and a recommendation is made to the Graduate School, which formally notifies the applicant of the admission decision. Applicants seeking admission to the program who do not meet the above requirements are considered on an individual basis. If an applicant desires such consideration, he or she should file all application materials as directed above. In addition to the materials required of all students, he or she should file, along with the School of Social Work application form, a petition for exemption from one or more requirements. The petition should state the requirement from which exemption is sought and should provide information supporting the petition. After the file is complete and referred to the PhD program by the Graduate School, the applicant may be invited to schedule an interview with the program chair or other member of the admissions committee, in order to assess individually the applicant's qualifications for doctoral studies in social work. A summary
of this interview and the petition for an exception will be made available to the Admissions Committee for consideration prior to its decision regarding an admissions recommendation.

If seeking exemption from the requirements, the applicant should be aware that he or she may be required to register for courses other than the standard curriculum, including courses at the MSW level. The amount and type of such work may be decided by the Admissions Committee before admission and/or by the applicant's academic advisor after admission.

**Additional Program Admission Requirements.** In addition to the above program admission requirements, it is recommended that the applicant also possess the following:

- a master's degree in social work from a program accredited by the Council on Social Work Education (CSWE) at the time of graduation.
- a minimum of two years of full-time employment (or its equivalent) in social work after earning the master's degree.

Many schools of social work require the MSW degree and at least two years of post-MSW practice experience for admission to the doctoral program in social work. In this program, they are highly recommended but not required. There are advantages to having the MSW and practice experience prior to matriculation in a PhD program. Students may be able to transfer up to 12 hours of MSW coursework into the PhD program, subject to Graduate School policies on transfer of credit. In addition, students with the MSW and practice experience will have more context in which to interpret the content of social work core courses. Finally, the BSW or MSW and practice experience will permit the applicant, under current CSWE accreditation standards, to engage in the full range of teaching and advising assignments at accredited schools of social work. Thus, the applicant will have a competitive advantage in the job market over someone who does not have the BSW or MSW and post-MSW practice experience.

Applicants admitted without the MSW must earn an MSW prior to receiving their Ph.D. It is the responsibility of such students to work with their academic advisor through this process.

**CONCURRENT ENROLLMENT IN THE MSW AND PhD DEGREES PROGRAMS.**

The University of Alabama School of Social Work offers an MSW/PhD concurrent program for individuals who hold, or are candidates for, bachelor's degrees who have strong interest in research careers in social work. These individuals may be admitted simultaneously to the MSW and PhD programs and work on both degrees concurrently. Those admitted to the concurrent program will complete all current requirements for the PhD degree. Specific required PhD coursework will be applied to specific MSW degree requirements, reducing the number of semester hours required for the MSW and PhD degrees by 18 hours. The MSW degree will be awarded when all requirements for the MSW completed, and the student will continue to work on the PhD requirements.

Successful applicants must meet the minimum admission requirements of the Graduate School and The School of Social Work MSW and PhD Programs.

Inquiries concerning the program or application may be made to the following address: The University of Alabama School of Social Work, Doctoral Program, Box 870314, Tuscaloosa, AL 35487-0314.

**PhD Degree Requirements**

A doctoral **Plan of Study** must be submitted to the Graduate School by the time the student completes 30 hours of UA credits and/or transfer credits for the doctorate. In the Social Work PhD Program, 53 hours of regular course work are required, not counting the statistics requirement. Typically, students who have completed the MSW will take 41 hours of course work and be given credit for up to 12 hours for the MSW degree. This total of 53 hours does not include the work to satisfy the statistical proficiency requirement or the student’s dissertation hours. Specific requirements of the doctor of philosophy in social work degree program are as follows:
• Twelve semester hours in a minor field taken from one or more areas outside the School.
• A statistical research competency demonstrated by successful completion of a research sequence of courses chosen from the educational research course sequence BER 540, BER 545, and BER 546; the political science course sequence PSC 522 and PSC 621; the College of Community Health Sciences course sequence CHS 525 and CHS 526. Alternatives may be approved.
• A dissertation showing the student's ability to conduct independent research that adds to the knowledge of the profession (includes a minimum of 24 hours of dissertation credit).
• Completion of all courses with a grade point average of 3.0 ("B") or better.

These requirements are minimum standards. Additional work may be required, depending on the student's preparation and career interests. Doctoral study must be completed within seven years.

**Residency Requirements.** The minimum period in which the PhD degree can be earned is three academic years of full-time graduate study (or the equivalent in a set of shorter segments). Both the fall and spring semesters of either the second or third academic year of study must be spent in continuous residence as a full-time student (as an alternative, the full-time residence may be completed by full-time enrollment during a summer session, including both summer terms, preceded or followed by a regular semester). Full-time residence study is defined as an academic load of 9 semester hours or more during a period when the student's principal activity is academic work.

**Admission to Candidacy.** A department-approved Admission to Candidacy for the Doctoral Degree form is submitted to the Graduate School as soon as possible after passing the comprehensive (preliminary) examination.

Additional information on Plan of Study, Residency, Admission to Candidacy, and all other degree requirements is in the Degree Requirements section of this catalog.

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**PhD Program.** The purpose of this program is to prepare persons who hold the master's degree in social work, or a related discipline or profession, for scholarly roles by advancing their knowledge and increasing their skills in theory-building, research methods, and the critical evaluation of social work policies and practice.

The doctoral program builds on a base of professional knowledge and practice in social work. It provides all students with advanced knowledge of research, social policy, and practice. In addition to a grounding in research methods, the program offers students the opportunity to develop a comprehensive understanding of a selected area of concentration and, through the dissertation, contribute to knowledge development in that area. To supplement this concentration area, students select a minor area in a single academic discipline or develop a comprehensive interdisciplinary minor. As soon as they enter the program, students are assigned to a PhD faculty advisor for program planning and guidance.

The program is notable among social work doctoral programs for the range and depth of its research foundation courses and electives. Exceptional opportunities are available for students interested in research in mental health, aging, and child welfare. There are opportunities for overseas experience as well as for collaboration with the Center for Mental Health and Aging, the Institute for Rural Health Research, the Institute for Social Science Research, the Program for Rural Services and Research, and the Youth Services Institute, with other colleges and departments of the University; and with various units of The University of Alabama at Birmingham (UAB).
**Time Limit.** All doctoral degree requirements must be completed in the 7 years (21 consecutive fall, spring and summer semesters) after admission.

**Obtaining Information.** Inquiries about the program and requests for application materials should be made to: The University of Alabama School of Social Work, PhD Program Office, Box 870314, Tuscaloosa, AL 35487-0314; telephone (205) 348-9785; fax (205) 348-9419.

**Financial Aid.** Some financial aid is available from the School of Social Work, including graduate assistantships and the Ben Avis Orcutt and Leslie J. Shellhase endowed scholarships, which are administered by the PhD program. For information on financial aid from other sources, visit the Financial Aid website.

Financial aid commonly takes the form of graduate teaching or research assistantships, special grants or fellowships, student loans, work-study, and/or part-time employment in a local social agency.
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15.5 PhD COURSE DESCRIPTIONS (SW)
Courses are subject to modification without advance notice

SW 600 Social Work and the Welfare State. Three hours.
Prerequisite: Admission to the PhD program or permission of the instructor.
Introduction to needs and opportunities for research in social welfare policy and its implementation, past and present. Examination of the development of the welfare state and current research on social welfare policy and its implementation.

SW 601 Seminar in Doctoral Education. One hour.
Provides students with an introduction to the PhD program, expectations for doctoral-level study, and familiarity with faculty and their research interests.

SW 605 Social Work Education. Three hours.
Prerequisite: SW 601
Focuses on the history, current structure, pedagogical theories, and contemporary issues important to social work educators.

SW 620 Social Work Research I. Three hours.
Prerequisite: Admission to the PhD program or permission of the instructor.
Prerequisite or corequisite: An approved statistics course.
Examination of some of the key theoretical issues of qualitative and quantitative social science research and the basic processes of theory formulation and knowledge building.

SW 621 Social Work Research II. Three hours.
Prerequisite: SW 620.
Prerequisite or corequisite: Completion of the statistics requirement or enrollment in an approved statistics course.
Continuation of SW 620. Prepares students to design and carry out quantitative, qualitative, and multi-method research appropriate and adequate for answering social work research questions. Focuses on research design, sampling, data collection and analysis, and dissemination of results and conclusions.

SW 622 Observation and Measurement. Three hours.
Prerequisites: SW 621 and completion of the statistics requirement or permission of the instructor.
Focuses on the theoretical foundations of observation and measurement in social research and on the practical skills for measuring social phenomena, including assessment of the psychometric properties of research instruments and the design of reliable and valid instruments.

SW 623 Seminar in Qualitative Research. Three hours.
Prerequisites: SW 621 and completion of the statistics requirement or permission of the instructor.
Advanced study of key concepts in qualitative research, with applications for social work practice research and evaluation.

SW 624 Seminar in Research on Social Work Practice. Three hours.
Prerequisites: SW 621 and completion of the statistics requirement or permission of the instructor.
Intensive study of selected research problems and relevant research methods concerning social work practice.

SW 628 Research Practicum. Three hours.
Prerequisites: SW 621 and completion of statistics requirement or permission of the instructor.
Development of a social work research proposal, including the conceptualization of the research question, review of pertinent literature, project administration, arrangements for
community collaboration, and IRB approval. Participation in ongoing research under faculty supervision.

**SW 629 Seminar in Special Topics in Social Work Research.** Three hours. Prerequisites: SW 621 and completion of the statistics requirement or permission of the instructor. Study of an advanced quantitative or qualitative method, approach, or technique with emphasis on knowledge-building applications of the method, approach, or technique.

**SW 640 Concepts and Theories of Social Work Practice.** Three hours. Prerequisite: Admission to the PhD program or permission of the instructor. Components of social work practice theory, including historical forces shaping conceptualizations of practice, the ideological and epistemological assumptions of both normative and empirical conceptualizations of practice, and the contributions of science and other approaches to knowledge and skill building.

**SW 648 Seminar in Social Work: Special Topics.** Three hours. Prerequisite: Admission to the PhD program or permission of the instructor. Integrative seminar on special topics.

**SW 660 Independent Study.** Three hours. Prerequisite: Completion of the doctoral core courses or permission of the instructor.

**SW 698 Nondissertation Research.** Variable credit.

**SW 699 Dissertation Research.** Variable credit. Three-hour minimum.