Graduate Catalog

About the Catalog

All sections of the catalog are listed below. The catalog is compiled and edited by the Graduate School with assistance provided by graduate program coordinators and the Provost’s Office.

- UALR General Information

Chancellor’s Welcome
About UALR
Facilities
Accreditation
Administrative Organization
Academic Calendar
Tuition, Fees, Payments, and Refunds
Student Life, Activities, and Services

- Graduate School General Information

Guide to the UALR Graduate School
Academic Policies and Procedures
Graduate Admissions
Graduate Programs
Financing Graduate Education

- Graduate Programs by College

All Graduate Programs
Programs in the College of Arts, Letters, and Sciences
Programs in the College of Business
Programs in the College of Education and Health Professions
Programs in the Donaghey College of Engineering and Information Technology (EIT)
Programs in the College of Social Sciences and Communication
Clinton School of Public Service
Graduate Courses

- People

Administration and Staff
Index of Faculty
Index of Faculty Emeriti
Chancellor’s Welcome

The University of Arkansas at Little Rock is a leader among metropolitan universities in outstanding academic programs, research, and community engagement. UALR is an anchor institution for the city of Little Rock and the State of Arkansas—a public university committed to providing convenient, high-quality educational opportunities to our students while helping address the needs of Arkansas and the region.

UALR provides a broad range of academic programs, including a comprehensive set of undergraduate majors, graduate certificates, master’s degrees, doctorates, and a law degree. The university also values the diversity and unique talents of our students and provides a wide-range of courses ranging from information quality to dance in traditional and fully-online formats in order to meet student needs.

Our alumni are leaders in Arkansas and around the world in technology, government, engineering, health care, the arts, education, social services, and business. Alumni will tell you that, in addition to acquiring new knowledge in your chosen discipline, your experience at UALR will strengthen your critical thinking and problem-solving skills, better preparing you to pursue graduate studies or career opportunities.

The university also plays a critical role in advancing Arkansas’s future. Through community partnerships and economic development initiatives, UALR helps the state compete in the global and increasingly knowledge-based economy. Our numerous partnerships with state and local government, businesses, and non-profit organizations can provide you with learning opportunities to develop and enhance the expertise necessary for your profession.

UALR is uniquely positioned to provide you with the skills, knowledge, and experience you need to reach the next step on your path to success. I encourage you to take advantage of all the university has to offer.

Go Trojans!

Sincerely yours,
Joel E. Anderson
Chancellor
About UALR
University of Arkansas at Little Rock

2801 South University
Little Rock, Arkansas 72204
Phone: (501) 569-3000

History

The University of Arkansas at Little Rock was founded in 1927 as Little Rock Junior College under the supervision of the Little Rock Board of Education. During the first semester, there were eight instructors and about 100 students. By 1929, the college was accredited by the North Central Association of Colleges and Schools, a status it has kept through changes in size and status.

Housed at first in public school buildings, the college moved in 1949 to its present location in southwest Little Rock on a beautifully wooded site donated by Raymond Rebsamen, a Little Rock businessman. By that time, the college was the sole beneficiary of a continuing trust established by former Governor George W. Donaghey.

The institution began a four-year degree program in 1957. At that time, the University was independent and privately supported under a separate board of trustees and took the name Little Rock University. In September 1969, after several years of discussion and study, Little Rock University merged with the University of Arkansas System to create the University of Arkansas at Little Rock. That was a major step in the creation of a multi-campus system. Within this structure, UALR is state supported, operationally separate, and specifically oriented toward serving the educational needs of Arkansas.

The University of Arkansas merger began a period of rapid growth, which saw UALR go from about 3,500 students and 75 full-time faculty members in 1969 to about 12,000 students and 500 full-time faculty members today. The University’s expanded offerings now include more than 100 undergraduate and graduate degrees, an extensive schedule of night, weekend, as well as extended programs. We also provide a wide range of community educational services. UALR began offering graduate and professional work in 1975 and the UALR Graduate School was created in 1977. Besides the juris doctor, UALR has ten doctoral programs and 39 graduate and professional programs, as well as joint programs with other campuses of the University of Arkansas System. UALR is classified by the Carnegie Foundation for the Advancement of
Teaching as a Doctoral/Research University.


Student Body

One of the most exciting things about UALR is the diversity reflected in the student body. The campus includes people ranging from the usual college age of 18-21, to many over 60. Most students work at least part-time, and many are married. Many go to college part-time and take one, two, or three courses a semester. Some students take courses for personal enrichment or job advancement without immediate plans to get a degree. About a third are going to college at night only. More than 60 percent of the students are women, about 29 percent are African-American, and a growing number are international students. The majority of students at UALR are transfer students.

Mission

University of Arkansas System Mission

The University of Arkansas System is a comprehensive, multi-campus, publicly-aided institution dedicated to the improvement of the mind and spirit through the development and dissemination of knowledge. The University embraces and expands the historic trust inherent in the land-grant philosophy by providing access to academic and professional education, by developing intellectual growth and cultural awareness in its students, and by applying knowledge and research skills to an ever-changing human condition. (Adopted by the University of Arkansas Board of Trustees, 1989)

Most universities today develop and publish statements explaining their purposes and describing their programs. Official boards that govern a campus or coordinate its activities in relation to other campuses also develop and publish such statements. For UALR there are mission statements and role and scope statements developed at three levels: the University of Arkansas System, the statewide coordinating board, and the campus. Although not identical, the statements are similar and consistent in content, each reflecting a different perspective from a different level of responsibility.
The mission statement typically is brief, general, and philosophical. It states why the institution exists. It addresses fundamental purposes and permanent commitments. It distinguishes the university from other societal institutions such as a church, a factory, a political party, or an elementary school.

The role and scope statement is more concrete and specific than the mission statement. Elements of a role and scope statement have only relative permanence. The role and scope statement distinguishes one university from other universities. Each university campus has a role to play in a larger cast of actors. Thus role and scope statements tend to be of particular concern to officials responsible for governing or coordinating multiple university campuses.

The role and scope statement typically discloses the nature and range of the institution’s responsibilities and activities: geographical service area; disciplines in which programs are provided; levels of degree offerings, e.g., associate, baccalaureate, master’s, doctoral; dominant characteristics of the student clientele; other constituencies to be served; emphasis areas; and sometimes future directions.

Included in this chapter are the mission statement of the University of Arkansas System, the role and scope statement for UALR adopted by the University of Arkansas Board of Trustees, and the role and scope statement for UALR published by the Arkansas Department of Higher Education and adopted by the Arkansas Higher Education Coordinating Board. They are followed by the current mission, objectives, and role and scope statements developed at UALR.

UALR Mission

The mission of the University of Arkansas at Little Rock is to develop the intellect of students; to discover and disseminate knowledge; to serve and strengthen society by enhancing awareness in scientific, technical, and cultural arenas; and to promote humane sensitivities and understanding of interdependence. Within this broad mission are the responsibilities to use quality instruction to instill in students a lifelong desire to learn; to use knowledge in ways that will contribute to society; and to apply the resources and research skills of the University community to the service of the city, the state, the nation, and the world in ways that will benefit humanity. (Adopted by the UALR Faculty Senate, 1988)

UALR Objectives

The University, through its various programs, works toward six mission objectives:

1. **Excellence in Instruction**: The University has a responsibility to provide excellence in instruction to ensure high-quality education for our students. This responsibility includes developing faculty teaching skills, awareness of the ways students learn, assessing student learning outcomes, and enhancement of resources to support effective instruction.

2. **Scholarly Inquiry**: The University has a responsibility to use scholarly inquiry to advance
the discovery, preservation, and dissemination of knowledge. This responsibility includes the creation of a university environment that supports diverse research activities by faculty, staff, and students.

3. **Service to Society:** The University has a responsibility to serve society through the application of knowledge and research skills. This responsibility includes applying the University’s resources to local, state, national, and international needs in order to improve the human condition.

4. **Community of Learning:** The University has a responsibility to provide a community of learning through creation of an academic environment that stimulates students, faculty, and staff to become lifelong learners. This environment should heighten the intellectual, cultural, and humane sensitivities of students, faculty, and staff.

5. **Accessibility:** The University has a responsibility to serve the needs of a heterogeneous student population and to make its resources accessible to the general public and to local, state, national, and international groups. This responsibility includes creating opportunities for access to the University’s academic and other resources.

6. **Responsiveness:** The University has a responsibility to remain responsive to a changing environment and society. This responsibility includes a continuous assessment of the University’s strengths and weaknesses in planning for and meeting internal and external needs. It also includes developing the faculty, staff, and students’ desire and capacity in order to create an academic community that is open to change and ready to meet the demands of a dynamic environment and student body.

(Adopted by the UALR Faculty Senate, 1988)

**UALR Role and Scope** Developed by the University of Arkansas Board of Trustees

The University of Arkansas at Little Rock (UALR) is a Carnegie “Doctoral/Research University” offering a comprehensive range of undergraduate, master’s, and doctoral programs, and a first professional degree in law. Due to its location in the state’s capital city and largest, most complex metropolitan area, the demand for UALR to offer graduate, professional, and doctoral education continues to increase, and, thus, post-baccalaureate offerings will become a larger part of the institution’s instructional program. Because of its metropolitan location, UALR assumes a special role in relation to the needs of urban areas in modern society in its instruction, research, and public service programs. UALR recognizes and accepts that in the 21st Century universities are critical to regional and state economic development.

UALR serves a diverse student body. While it serves traditional students as do most other universities, UALR also serves large numbers of nontraditional students who enroll part-time, commute to campus, have job and family responsibilities, and may be older. The university also enrolls international students from more than 50 countries. Honors courses and a nationally recognized undergraduate scholars program respond to the needs of superior students while students with developmental needs are afforded organized assistance in meeting their educational goals. UALR emphasizes excellence in teaching by all faculty. Developing
UALR is strongly committed to research and public service. Faculty engage in applied and basic research appropriate to their academic disciplines and in response to economic development needs and other state and regional needs. The university is committed to supporting research and development, often in cooperative relationships, leading to intellectual property and commercialization. UALR’s public service mission is reflected in numerous outreach activities by individual faculty members, academic units, and a number of specialized units established to provide assistance and expertise to organizations and groups in the community and across the state.

Partnerships are very important to UALR for they enable the university to extend its reach, increase its effectiveness, and leverage its resources. UALR works with other institutions of higher education—particularly the University of Arkansas for Medical Sciences, the University of Arkansas Cooperative Extension Service, the University of Arkansas Clinton School of Public Service, and Pulaski Technical College—to coordinate instructional programs. UALR partners with and complements the research activities of the University of Arkansas for Medical Sciences. UALR gives and receives benefit from partnerships with businesses, schools, governmental offices, neighborhood groups, cultural organizations, and nonprofit organizations.


UALR Role and Scope Developed by the Arkansas State Board of Higher Education

Audiences

As the state’s metropolitan university, the University of Arkansas at Little Rock (UALR) has the responsibility for serving:

- Residents of Arkansas and the Little Rock metropolitan area who have completed a high school education and are seeking either a college degree or continuing professional education. As a metropolitan university, the institution serves adult, part-time students in particular.
- Employers across the state, particularly in the region, both public and private, seeking well-educated employees, technical assistance and applied research.
- Economic development interests and entrepreneurs in the region and across the state.
- The research community.
- The community and area by providing a broad range of academic and cultural activities and public events.
- Area K-12 schools seeking college general education courses for advanced students.
- Two-year college transfer students.

Array of Programs and Services
UALR serves these audiences by providing:

- Baccalaureate programs in arts and humanities, the natural sciences, and social sciences appropriate to a teaching institution with a predominantly undergraduate student body.
- Associate, baccalaureate and masters programs in the professional fields of particular importance in the region, including journalism and communications, public administration and community services, computer and information science, nursing, human services (including social work and criminal justice), education, engineering, and business.
- Doctoral programs most needed by regional and state employers, most importantly programs in education and applied science.
- Services specifically designed to meet the needs of statewide and regional economic development—continuing professional education, technical and professional services, support of small businesses and entrepreneurs, and technology transfer.

**Special Features**

Institute for Economic Advancement  
Nanotechnology Center  
UALR-UAMS joint academic and research programs.  

**UALR Role and Scope Developed by the UALR Faculty Senate**

The University of Arkansas at Little Rock offers certificates and degree programs at the associate, baccalaureate, master's, specialist, and doctoral levels. Disciplines in which degrees are offered include applied science, the arts; business, health, and public administration; communication; education; engineering technology; the humanities; law; social, physical, and life sciences; and social work. The institution emphasizes the liberal education of undergraduate students and offers more focused professional study, particularly at graduate levels.

The University of Arkansas at Little Rock, taking advantage of its metropolitan location, offers programs and services that respond to the special needs and interests of individuals, organizations, institutions, businesses, and governmental units. Academic programs, student services, research activities, public service projects, and institutional policies reflect the University's commitment to a diverse student body composed of recent high school graduates, students returning to school after other experiences, retirees, international students, disabled students, and professionals seeking career change or enrichment. A significant percentage of these students attend school part-time and work full- or part-time. As a result, many UALR students bring experience and a high level of motivation into the classroom.

The University of Arkansas at Little Rock strives to make higher education accessible to all those who can benefit. The institution's academic courses are offered in flexible and varied time periods and learning formats, at off-campus locations as well as in traditional classrooms, and by radio, telecommunication, and newspaper. In all of these forms the quality of instruction is of paramount importance. The University has a nationally recognized scholars program and
curriculum, honors courses, and other programs for superior students. Specialized programs and assistance are offered to educationally disadvantaged students. The University is committed to international education, supporting programs and courses that attract international students and offer opportunities for all students to explore and experience other cultures.

The University of Arkansas at Little Rock recognizes its responsibility to contribute to bodies of knowledge through research as well as to disseminate ideas through instruction. The University fosters both basic and applied research appropriate to its programs and faculty. The University supports grant applications and other attempts to gain sponsorship for research. Many research activities address the problems of Arkansas as it interacts with an increasingly complex and interdependent world.

The University of Arkansas at Little Rock shares its resources with the larger community through public service. Activities include noncredit educational offerings ranging from college preparatory classes to courses for personal enrichment and awareness; special programs for pre-collegiate students; programs for professional advancement; and institutes and centers to focus research and study on such areas as teaching and learning, technology, government, management, and urban affairs. The University serves the State of Arkansas in economic development through assistance from businesses, seminars for managers and workers, and support for entrepreneurial ventures. The University provides leadership in cultural enrichment and makes its resources available to the community. Relationships with local, state, and national governments and with business and industry strengthen the curriculum and provide students and faculty opportunities to apply theory and research.

The University anticipates continued growth in the number of students and in the number and size of academic programs. The primary aim of the University in all of its varied activities will continue to be maintaining and improving the quality of education for all its students.

(Adopted by the UALR Faculty Senate, 1988)

Accreditations and Affiliations

The University of Arkansas at Little Rock is fully accredited by the North Central Association of Colleges and Schools. UALR is also a Service-Members Opportunity College.

Specific degree programs are also accredited or affiliated with many external accrediting/certifying bodies. A complete list can be found on the Accreditation website.

Assessment

Units across campus regularly engage in research to assess UALR’s success in meeting these objectives. Assessment at UALR is designed to help the academic programs – whether core, undergraduate, or graduate – focus on what should be taught in the program and whether it is...
being taught successfully.

This involves a variety of methods of inquiry to examine student needs, attributes, and success in learning. Each academic unit at UALR has an assessment program to conduct research that will be used to make decisions to improve its curriculum, instruction, and both academic and career advising. Students, alumni, and various stakeholders participate in a variety of assessment activities designed to assess learning in the major and in the core curriculum.
Facilities

The 150-acre UALR main campus features buildings finished in glass, concrete, and orange brick, and wooded areas of pine and oak trees. Most of the buildings were built after 1970, and none was built before 1947. The campus features two fountains, most notably the Elizabeth Cooper Fountain west of Student Union Building A.

Administration Building
(North and South)
The Administration building consists of two separate sections, Administration North and Administration South, linked by an outdoor atrium. The former Administration South building is home to the Department of Nursing. This state-of-the-art facility is the product of a $7 million dollar renovation project. This facility houses a simulation laboratory and cutting-edge technology used to train our next generation of nursing professionals.

The Administration North houses the Office of Financial Services, Student Accounts, and the cashier on the ground level floor.

Dr. Ted and Virginia Bailey Alumni and Friends Center

Contains over 8,200 square feet and is available to campus and community groups for meetings, programs, and social functions, is home to the Alumni Association, Office of Community Engagement, Friday Leadership Program, and University District.

UALR Benton Center

410 River Street, Benton, Arkansas
72015
(501) 860-6003
UALR students can attend classes at our Benton Center and enjoy the convenience of staying close to home as they pursue their studies. Completing a
4-year Bachelor’s degree at the Little Rock campus is a seamless transition – no transfers required! UALR courses are taught at Benton by UALR faculty. Students have regular student privileges at the UALR campus and are subject to regular academic policies.

Services offered at UALR Benton include textbook sales and buy-back (for classes taught there) as well as academic advising and financial aid assistance (by appointment only).

Center for Performing Arts

Is located on the south end of the UALR campus, houses the Department of Theatre Arts and Dance and consists of two theatres. University Theatre, the main performance venue, is a 650-seat proscenium theatre-the site of academic activities, theatre and dance, and programs of public interest. Haislip Arena Theatre, also known as Studio 127, accommodates up to 140 attendees.

Communications Building

Houses the UALR Office of Communications, which provides the campus community with a variety of communications services, including advertising and marketing, public relations, graphic design, web design, special events, and media training.

H. Tyndall Dickinson Hall

Opened in spring 2000, houses the College of Education and the Departments of Mathematics and Statistics, Educational Leadership, and Teacher Education, as well as offices for the Academy of Teaching and Learning Excellence (ATLE) and Scholarly and Technology Resources (STaR).
Donaghey Student Center

The Donaghey Student Center (DSC) provides facilities and services unique to university life. The 205,000 square-foot building opened on August 16, 1993. The DSC combines a traditional student center with a fitness and aquatics center. The DSC houses the Office of the Vice Chancellor for Educational and Student Services/Dean of University College, the Office of Campus Life, University Program Council, Student Government Association, Health Services, UALR Bookstore, UALR Forum, UALR Dining Services, Disability Resource Center, Cyber Cafe, DSC Fieldhouse, the multifunctional Fitness & Aquatics Center, and much more. The Fitness & Aquatics Center houses fitness equipment and Central Arkansas’ only indoor olympic-sized pool. The DSC offers meeting and event facilities to accommodate conferences, meetings, banquets, special events, sports/recreation, and aquatic events (501-569-3324). Additionally, the DSC manages the UALR Campus Card (official University ID), which provides access to the Ottenheimer Library, the DSC Fitness and Aquatic Center and residence halls, and may be used as a meal card in dining services.

The Donaghey Student Center is professionally affiliated with the National Association of College Auxiliary Services, the Association of College Unions-International, and the National Intramural-Recreational Sports Association. For more information about the facilities and services call (501) 569-3362 or visit the website.

Earth Sciences Building

The Earth Sciences Building was completed in 1959 as a complex to house all the life sciences. It was completely remodeled in 1975 and now houses teaching, research, and sample laboratories for the Department of Earth Sciences, biology research laboratories, and a mathematics laboratory.
Education Building and John A. Larson Hall

The Education Building (formerly the North Building) and John A. Larson Hall (formerly the South Building were the first buildings erected on the campus when the institution moved to its current site in 1949. For many years the two buildings provided classrooms, faculty offices, administrative offices, and laboratories for the small but growing college. The Education Building now houses the Center for Applied Studies in Education while Larson Hall houses the School of Social Work and Dean of Extended Programs.

Engineering and Information Technology Building

The Engineering and Information Technology Building was completed during the summer of 2010 and houses the Donaghey College of Engineering and Information Technology dean’s office as well as Departments of Computer Science, Information Science, Systems Engineering, and the Midsouth Bioinformatics Center. The building is the first LEED gold facility in the University of Arkansas System. LEED, or Leadership in Energy and Environmental Design, is the nationally accepted program for benchmarks in design, construction and operation of high-performance green buildings. Gold certification is the second highest level of certification.
Engineering Technology and Applied Sciences Building

The Engineering Technology and Applied Sciences Building was completed in 1987, houses the Graduate Institute of Technology and the Departments of Applied Science, Construction Management, Engineering Technology, and Nursing. The 180,000 square foot building also houses the Colleges of Science and Mathematics, parts of the Donaghey College of Engineering and Information Technology, Nanotechnology Center, Office of Innovation and Commercialization, and Earthquake Center.

Facilities Management Building

The Facilities Management Building, formerly the Seymour Terry Army Reserve Center, was leased to UALR in 1990. The 2.66-acre site was constructed in 1951 and now houses Facilities Management and MidSOUTH Center for Leadership and Training, a program of the School of Social Work. MidSOUTH also administers the Academy for Family-Centered Training at the Baker Building at Markham and University.

Fine Arts Building

The Fine Arts Building, completed in the fall of 1977, houses the Departments of Art and Music as well as the Community School of the Arts. In addition to general classrooms and highly specialized instructional space for the two departments, the building includes three galleries and the 312-seat Stella Boyle Smith Concert Hall, which was renovated in 2010.

James H. Fribourgh Hall

James H. Fribourgh Hall (formerly the Natural Sciences Building, initially completed in 1975), contains laboratories, faculty offices, classrooms, and other facilities for the Departments of Earth and Life Sciences as well as the Planetarium with its 40-foot dome. The building also houses the Arkansas STRIVE Program of the Arkansas Small Business and Technology Development Center.
Ottenheimer Library

The Ottenheimer Library contains more than a half million print books and provides online access to over 50,000 electronic journals, 18,000 electronic books and 200 scholarly databases. Online access is made available via the library’s Web site. Members of the library staff look forward to working with you in support of your research and instructional needs. If there is any way we can better serve you, please let us know.

Reference Collection

Reference materials are located on the 1st floor.

Government Information

Physical copies of U.S. government publications are located on the 1st floor and most are available for circulation.

Reserve Items

Reserve items are located on the 1st floor. Materials placed on reserve by an instructor may be obtained from the circulation desk.

Journals

Journals are located on the 3rd floor and are arranged in alphabetical order by title.

Circulating Materials

Circulating materials are on the 4th and 5th floors. Library of Congress call numbers beginning with A-QA79 are on the 4th floor. The sequence begins in the northwest corner and ends in the middle of the floor on the east side. QA80-Z call numbers are on 5th floor. This sequence begins on the southwest side of the floor and ends at the southeast side.

Other Locations

- **Restrooms** are located on each floor.
- **Photocopiers/Scanners** are located on the 1st floor. A campus ID is required to make copies; money can be added to the campus ID at a value station located on the 1st floor. Copies are 10 cents for black and white and 20 cents for color. Users without a campus ID, can purchase a blank copy card at the circulation desk for $1.00. Scanning to e-mail or a USB drive is free.
There are four book drops located throughout the campus. Materials can be returned at any of these book drops twenty-four hours a day. Please see Book Drops for locations. The fifth floor houses the offices of Research and Sponsored Programs; Institutional Research; Research and Sponsored Programs; and the Graduate School.

Nanotechnology Building

With the UALR Center for Integrative Nanotechnology Sciences, Arkansas is well poised to take advantage of this exciting new world of economic opportunities and capitalize on nanotechnology breakthroughs discovered at UALR and other universities throughout the state. The Center for Integrative Nanotechnology Sciences is a state-of-the-art, user-oriented facility focused on research, education, and economic development.

Parking Deck

The Parking Deck, which opened in 1992, is located east of the Donaghey Student Center. It is open to students, employees, and visitors for $1.00 per exit. Reserved parking is provided on the deck’s lower level.

Physics Building

The Physics Building houses the Department of Physics and Astronomy, including classrooms, laboratories, and departmental offices. The building was erected in 1967 and renovated in 1975.
Donald W. Reynolds Center for Business and Economic Development

The Donald W. Reynolds Center for Business and Economic Development, completed in 2002, is a 98,700-square-foot-building that contains 150 offices, an auditorium, atrium, library, and 13 modern classrooms. The building houses the College of Business as well as the Departments of Management, Accounting, Economics and Finance, and Marketing and Advertising. In addition, the Arkansas Small Business and Technology Development Center and the Institute for Economic Advancement make their homes in the Reynolds building.

G. Robert Ross Hall

G. Robert Ross Hall (formerly the Business Administration Building) opened during the 1981-1982 academic year. It houses the Offices of Academic Advising, Cooperative Education, Counseling and Career Planning, and Testing Services and Student Life Research. In addition, it is home to the Department of Criminal Justice, Institute of Government, College of Professional Studies, and the Military Science ROTC Program. It includes general purpose classrooms, including two small lecture halls.

Science Laboratories Building

The Science Laboratories Building, adjacent to Fribourgh Hall, was completed in 1998 and added 80,000 square feet for the Departments of Biology, Chemistry, and Earth Science. The first two floors house classrooms and teaching laboratories. The third and fourth floors are research laboratories for the biology and chemistry departments. In addition, the chemistry department’s office is located on the fourth floor.

Speech Communication Building

The Speech Communication Building, completed in 1976, houses the Department of Speech Communication, Academic Success Center, Arkansas Advanced Initiative for Math and Science (AAIMS), and the Office of Purchasing.
Stabler Hall

Stabler Hall was completed in 1973 and renovated in 2009, launched UALR’s concept of constructing taller buildings to conserve space. The seven-story structure features a 200-seat lecture hall on the first floor and an observatory on the roof. The building houses the Departments of Psychology, Sociology and Anthropology, Political Science, Philosophy and Liberal Studies, English, Geography, and History. The School of Mass Communication, Office of International Services, Division of International and Second Languages, Nonprofit Leadership Studies, Arkansas International Center, and Center for Arkansas Studies are situated there also. Faculty in the College of Arts, Humanities, and Social Sciences also occupy classrooms in the building, which houses the campus television station.

Jack Stephens Center

The Jack Stephens Center, a 149,000-square-foot athletic center that features a full-court practice gym named after UALR alumnus Derek Fisher, an academic support center complete with 23 computer terminals, a first-class weight room, an athletic training room, locker rooms for the men’s and women’s basketball and volleyball teams, and offices for the men’s and women’s basketball and volleyball coaches, as well as the athletic administration and support staff.

Student Housing

UALR offers a variety of housing options to meet the needs of the diverse student body.

The East Hall is a traditional suite style, furnished, co-ed, two bedroom units shared by four students. Includes kitchenette, bath, and living area.

There are also the Commons Apartments, North and South Halls. To qualify for the apartments you must be in good standing, have a minimum 2.0 GPA and one of the following: Minimum 30 completed course hours, EIT or Donaghey Scholarship recipient, or UALR Student Athlete.
The University Courts are UALR’s Non-Traditional Student Housing and are reserved for non-traditional students over 21. These one bedroom/one bath apartments include full kitchen, cable, and wireless internet.

UALR also owns several houses in the Oak Forrest neighborhood. These unfurnished houses are available for student, faculty or staff families.

The Office of Student Housing maintains lists of individuals seeking roommates and apartments, townhouses, duplexes, rooms, and mobile homes available in greater Little Rock. The office also has apartment guides, commercial and private listings, brochures, and other information. All rental arrangements on privately owned accommodations are between the renter and tenant.

UALR adheres to all federal and state regulations and guidelines regarding nondiscrimination in housing. Inquiries may be made to the Office of Student Housing at (501) 661-1743 or by visiting online at http://ualr.edu/housing/.

Student Services Center

The Student Services Center is located adjacent to the Ottenheimer Library and adjoining the Donaghey Student Center by sky walk. The building houses Administration (Office of the Chancellor, Provost and Vice Chancellor of Academic Affairs, Vice Chancellor of Finance and Administration, and Vice Chancellor of University Advancement), The Office of Admissions & Financial Aid, Office of Records and Registration, Bursar’s Office (Student Accounts) and Cashiers Office, Academic Advising (University College), Private Scholarships, Veteran Affairs, and the Office of Transfer Student Services. The building also includes a 205-seat auditorium.

Student Union Building A

Student Union Building (SUA) A, which houses Mail Services and the Center for Gifted Education, also houses the College of Arts, Humanities, and Social Studies Learning Technology Center. Within the center, SUA 106 Classroom Suite provides classrooms devoted to writing, graphics, and audio. SUA 102 Core Classroom Suite houses classrooms specifically designed for technology-enhanced core curricula within the college.
Student Union Building B

Student Union Building B, built in 1969, houses Computing Services on its upper floor and the Department of Rhetoric and Writing, Little Rock Writing Project, and University Writing Center on its ground floor.

UALR Bowen School of Law

The UALR Bowen School of Law is located downtown at 1201 McMath Avenue in the 152,000-square-foot Law Center adjacent to MacArthur Park.

UALR Children International

UALR Children International, located just east of the campus at 2510 Fair Park Boulevard, provides office space and a service-learning site for more than 300 UALR and UAMS students, faculty, and staff who serve as trainers, mentors, tutors, and health care professionals at seven elementary schools.

University Plaza

University Plaza is a 22-acre shopping center bordering Asher Avenue directly south of the campus, was purchased and renovated in 2005. This space is now home to the public radio stations KUAR and KLRE, the Sequoyah National Research Center, the Applied Arts Program, the Department of Audiology and Speech Pathology, the Department of Public Safety, and components of the Department of Construction Management. In addition, the all-important UALR Welcome Center, home of the Office of Recruitment, is located in the plaza’s parking lot.

The University Services Building

The University Services Building (formerly the Student Services Building), completed in 1974, provides a convenient location for the Office of Human Resources and Printing Services.
Welcome Center

The Student Welcome Center is located in the parking lot across from the University Plaza. The Center houses the Office of Recruitment. This office was created to better serve our prospective students and their families. The staff are here to help you find out if UALR is the right place for you.
The University of Arkansas at Little Rock is accredited by the Higher Learning Commission, North Central Association.

**University of Arkansas at Little Rock**
2801 South University
Little Rock, Arkansas 72204
Phone: (501) 569-3000
ualr.edu

**The Higher Learning Commission**
30 North LaSalle Street, Suite 2400
Chicago, Illinois 60602-2504
Phone: (800) 621-7440 / (312) 263-0456
Fax: (312) 263-7462
ncahlc.org

Accreditations and Affiliations

UALR is a Service-Members Opportunity College.

Specific degree programs are also accredited or affiliated with many external accreditting/certifying bodies. A complete list is located on the Accreditation website at http://ualr.edu/accreditation/
Administrative Organizations

The University of Arkansas at Little Rock falls under the University of Arkansas System. A complete listing of the Administration and Staff is found in this catalog.

Academic Affairs

The Chancellor is the executive officer of UALR.

The Executive Vice Chancellor and Provost is in charge of all Academic Affairs and is the chief academic officer of UALR. The Provost provides academic and administrative leadership in the area of academic and faculty affairs. All of our programs of study fall under a specific department or school, which in turn falls under a specific college, which in turn falls under the Provost.

Enrollment Management

The Division of Enrollment Management provides quality support and services to UALR’s students and maintains relationships with academic departments, students, and community groups. The Vice Chancellor for Enrollment Management has the general responsibility for coordinating services to students.

Office of the Vice Chancellor for Finance and Administration:

- Information Technology Services
- Human Resources
- Facilities Management
- Public Safety
- Financial Services (Student Accounts/ Bursar)
- Mail Services
- Contracts and Auxiliary Services (Printing Services)

Office of the Vice Chancellor for Advancement:

- Alumni
- Development
- Communications
- Corporate and Foundation Relations
- Planned Giving
- Prospect Research
Academic calendar

The current and official academic calendar for UALR is maintained by the Office of Records and Registration. For information regarding the payment dates for each semester, please visit the Bursar’s Office website.

<table>
<thead>
<tr>
<th>Spring 2016 Registration Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grad/Post-Bacc/Senior/Special Groups* Priority Registration</td>
</tr>
<tr>
<td>Priority Registration For Juniors</td>
</tr>
<tr>
<td>Priority Registration For Sophomores</td>
</tr>
<tr>
<td>Priority Registration For Freshmen</td>
</tr>
<tr>
<td>Priority Registration For All Students</td>
</tr>
<tr>
<td>Regular Registration For All Students</td>
</tr>
<tr>
<td>Late Registration For All Students</td>
</tr>
</tbody>
</table>

Full Term – 1

- Regular Registration                                      | Jan. 4 – 10 |
- Late Registration                                         | Jan. 11 – 15, by 4 p.m. |

Senior Citizen Registration                                | Jan. 8 – 15 by 4 p.m. |

First 10 Week Term – 101

- Regular Registration                                      | Jan. 4 – 10 |
- Late Registration                                         | Jan. 11 – 13 by 4 p.m. |

Senior Citizen Registration                                | Jan. 8 – 13 by 4 p.m. |

Second 10 Week Term – 102

- Regular Registration                                      | Jan. 4 – Feb. 19 |
- Late Registration                                         | Feb. 22 – 24, by 4 p.m. |

Senior Citizen Registration                                | Feb. 19 -24, by 4 p.m. |

First 8 Week Term – 810

- Regular Registration                                      | Jan. 4 – 10 |
### Academic Calendar - Student Records

<table>
<thead>
<tr>
<th>Event Type</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>-Late Registration</td>
<td>Jan 11 – 13, by 4 p.m.</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Jan. 8 -13 by 4 p.m.</td>
</tr>
<tr>
<td>Second 8 Week Term – 820</td>
<td></td>
</tr>
<tr>
<td>-Regular Registration</td>
<td>Jan. 4 – Mar. 14</td>
</tr>
<tr>
<td>-Late Registration</td>
<td>Mar 14 – 16, by 4 p.m.</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Mar. 11 – 16 by 4 p.m.</td>
</tr>
<tr>
<td>First 5 Week Term – 510</td>
<td></td>
</tr>
<tr>
<td>-Regular Registration</td>
<td>Jan. 4 – 10</td>
</tr>
<tr>
<td>-Late Registration</td>
<td>Jan 11 – 12, by 4 p.m.</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Jan. 8 – 12 by 4 p.m.</td>
</tr>
<tr>
<td>Second 5 Week Term – 520</td>
<td></td>
</tr>
<tr>
<td>-Regular Registration</td>
<td>Jan. 4 – Feb. 21</td>
</tr>
<tr>
<td>-Late Registration</td>
<td>Feb. 22 -23, by 4 p.m.</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Feb. 19 – 23, by 4 p.m.</td>
</tr>
<tr>
<td>Third 5 Week Term – 530</td>
<td></td>
</tr>
<tr>
<td>-Regular Registration</td>
<td>Jan. 4 – Apr. 8</td>
</tr>
<tr>
<td>-Late Registration</td>
<td>Apr. 11 – 12, by 4 p.m.</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Apr. 8 – 12, by 4 p.m.</td>
</tr>
</tbody>
</table>

**Special Groups** include benefits eligible Military/Veterans, Donaghey Scholars, Athletes, and Science Scholars

### General Dates

<table>
<thead>
<tr>
<th>Event Type</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergrad Admission Application Deadline</td>
<td>Please visit the <a href="#">Office of Admission’s website</a>.</td>
</tr>
<tr>
<td>University Closed (Martin Luther King, Jr. Day)</td>
<td>Jan. 18</td>
</tr>
<tr>
<td>Graduation Application Due</td>
<td>Mar. 4</td>
</tr>
<tr>
<td>GradFest (DSC Lower Level)</td>
<td>Mar. 9 &amp; Mar. 10 (11 a.m. to 6 p.m.)</td>
</tr>
<tr>
<td>Spring Break</td>
<td>Mar. 21 – 27 (University Closed Mar. 25)</td>
</tr>
<tr>
<td>Commencement Information Sessions (Location – TBA)</td>
<td>Apr. 20 (Noon and 5 p.m.)</td>
</tr>
<tr>
<td>Commencement</td>
<td>May 14 (9:30 a.m. and 3 p.m.)</td>
</tr>
</tbody>
</table>
Deadlines to Remove Incomplete Grade Received in Spring 2016

| Last Day to Remove "I" Received in Full Term | Aug. 11, 2016 |
| Last Day to Remove "I" Received in 1st 10 Week Term | Jun. 29, 2016 |
| Last Day to Remove "I" Received in 2nd 10 Week Term | Aug. 9, 2016 |
| Last Day to Remove "I" Received in 1st 8 Week Term | Jun. 8, 2016 |
| Last Day to Remove "I" Received in 2nd 8 Week Term | Aug. 17, 2016 |
| Last Day to Remove "I" Received in 1st 5 Week Term | May 17, 2016 |
| Last Day to Remove "I" Received in 2nd 5 Week Term | Jul. 5, 2016 |
| Last Day to Remove "I" Received in 3rd 5 Week Term | Aug. 5, 2016 |

**All terms with a Jan. 11 start date**

**Spring Full Term (regular semester - 1) Jan. 11 - May 10**

| Regular Registration | Jan. 4 – 10 |
| Senior Citizen Registration | Jan. 8 – 15, by 4 p.m. |
| Classes Begin | Jan. 11 |
| Late Registration | Jan. 11 – 15, by 4 p.m. |
| Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status | For payment dates or refund schedule please visit the Bursar's Office Website. |
| Saturday Classes Begin | Jan. 16 |
| Last Day to Drop or Withdraw for 50% Refund | For payment dates or refund schedule please visit the Bursar's Office Website. |
| Last Day to Drop an Individual Class | Mar. 8, by 5 p.m. |
| Last Day of Class | May 2 |
| Last Day to Withdraw From All Classes | May 2, by 5 p.m. |
| Consultation Day | May 3 |
| Final Exams | May 3 – 10 |
| Grades Due | May 13, by 12 noon |

**First 10-Week Term (101) - Jan. 11 - Mar. 28**
# Academic Calendar - Student Records

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Registration</td>
<td>Jan. 4 – 10</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Jan. 8 – Jan. 13, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>Jan. 11</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Jan. 11 – 13, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Saturday Classes Begin</td>
<td>Jan. 16</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Feb. 18, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day to Withdraw From All Classes</td>
<td>Mar. 24, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>Mar. 28</td>
</tr>
<tr>
<td>Final Exams</td>
<td>Mar. 28</td>
</tr>
<tr>
<td>Grades Due</td>
<td>Mar. 30, by 12 noon</td>
</tr>
</tbody>
</table>

## First 8-Week Term (810) - Jan. 11 - Mar. 7

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Registration</td>
<td>Jan. 4 – 10</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Jan. 8 – Jan. 13, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>Jan. 11</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Jan. 11 – 13, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Saturday Classes Begin</td>
<td>Jan. 16</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Feb. 10, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day to Withdraw From All Classes</td>
<td>Mar. 4, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>Mar. 7</td>
</tr>
<tr>
<td>Final Exams</td>
<td>Mar. 7</td>
</tr>
<tr>
<td>Grades Due</td>
<td>Mar. 9, by 12 noon</td>
</tr>
</tbody>
</table>

## First 5-Week Term (510) - Jan. 11 - Feb. 15
<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Registration</td>
<td>Jan. 4 – 10</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Jan. 8 – 12, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>Jan. 11</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Jan. 11 – 12, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Saturday Classes Begin</td>
<td>Jan. 16</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Jan. 29, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day to Withdraw From All Classes</td>
<td>Feb. 12, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>Feb. 15</td>
</tr>
<tr>
<td>Final Exams</td>
<td>Feb. 15</td>
</tr>
<tr>
<td>Grades Due</td>
<td>Feb. 17, by 12 noon</td>
</tr>
</tbody>
</table>

**All terms with a Feb. 22 start date**

**Second 10-Week Term (102) - Feb. 22 - May 6**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Registration</td>
<td>Jan. 4 – Feb. 19</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Feb. 19 -Feb. 24, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>Feb. 22</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Feb. 22 – 24, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Saturday Classes Begin</td>
<td>Feb. 27</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Apr. 5, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day to Withdraw From All Classes</td>
<td>May 5, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>May 6</td>
</tr>
<tr>
<td>Final Exams</td>
<td>May 6</td>
</tr>
<tr>
<td>Grades Due</td>
<td>May 10, by 12 noon</td>
</tr>
</tbody>
</table>
Second 5-Week Term (520) - Feb. 22 - Apr. 1

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Registration</td>
<td>Jan. 4 – Feb. 21</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Feb. 19 – Feb. 23, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>Feb. 22</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Feb. 22 – 23, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status</td>
<td>For <a href="#">payment dates</a> or <a href="#">refund schedule</a> please visit the <a href="#">Bursar's Office Website</a>.</td>
</tr>
<tr>
<td>Saturday Classes Begin</td>
<td>Feb. 27</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For <a href="#">payment dates</a> or <a href="#">refund schedule</a> please visit the <a href="#">Bursar's Office Website</a>.</td>
</tr>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Mar. 10, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day to Withdraw From All Classes</td>
<td>Mar. 31, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>Apr. 1</td>
</tr>
<tr>
<td>Final Exams</td>
<td>Apr. 1</td>
</tr>
<tr>
<td>Grades Due</td>
<td>Apr. 5, by 12 noon</td>
</tr>
</tbody>
</table>

**All terms with a Mar. 14 start date**

Second 8-Week Term (820) - Mar. 14 - May 13

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Registration</td>
<td>Jan. 4 – Mar. 13</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Mar. 11 -Mar. 16, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>Mar. 14</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Mar. 14 – 16, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status</td>
<td>For <a href="#">payment dates</a> or <a href="#">refund schedule</a> please visit the<a href="#">Bursar’s Office Website</a>.</td>
</tr>
<tr>
<td>Saturday Classes Begin</td>
<td>Mar. 19</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For <a href="#">payment dates</a> or <a href="#">refund schedule</a> please visit theBursar’s Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Apr. 19, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day to Withdraw From All Classes</td>
<td>May 12, by 5 p.m.</td>
</tr>
</tbody>
</table>
Last Day of Class | May 13
--- | ---
Final Exams | May 13
Grades Due | May 17, by 12 noon

**All terms with an Apr. 11 start date**

Third 5-Week Term (530) - Apr. 11 - May 13

<table>
<thead>
<tr>
<th>Regular Registration</th>
<th>Jan. 4 – Apr. 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Citizen Registration</td>
<td>Apr. 8 – 12, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>Apr. 11</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Apr. 11 – 12, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status</td>
<td>For payment dates or refund schedule please visit the Bursar's Office Website.</td>
</tr>
<tr>
<td>Saturday Classes Begin</td>
<td>Apr. 16</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For payment dates or refund schedule please visit the Bursar's Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Apr. 29, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day to Withdraw From All Classes</td>
<td>May 12, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>May 13</td>
</tr>
<tr>
<td>Final Exams</td>
<td>May 13</td>
</tr>
<tr>
<td>Grades Due</td>
<td>May 17, by 12 noon</td>
</tr>
</tbody>
</table>

**Summer 2016**

**Registration Dates**

<table>
<thead>
<tr>
<th>Priority Registration by class standing</th>
<th>Mar. 28 – Apr. 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>-Grad/Post-Bacc/Senior</td>
<td>Mar. 28 – Mar. 29</td>
</tr>
<tr>
<td>-Juniors</td>
<td>Mar. 30</td>
</tr>
<tr>
<td>-Sophomores</td>
<td>Mar. 31</td>
</tr>
<tr>
<td>-Freshmen</td>
<td>Apr. 1</td>
</tr>
<tr>
<td>Early Registration For All Students</td>
<td>Apr. 2 – May 15</td>
</tr>
<tr>
<td>Term</td>
<td>Regular Registration</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td><strong>10 Week Term</strong></td>
<td>May 16 – 22</td>
</tr>
<tr>
<td><strong>8 Week Term</strong></td>
<td>May 16 – June 5</td>
</tr>
<tr>
<td><strong>First 5 Week Term</strong></td>
<td>May 16 – 22</td>
</tr>
<tr>
<td><strong>Second 5 Week Term</strong></td>
<td>May 16 – Jul. 4</td>
</tr>
</tbody>
</table>

Special Groups* include benefits eligible Military/Veterans, Donaghey Scholars, Athletes, and Science Scholars

**General Dates**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergrad Admission Application Deadline</td>
<td>Please visit the Office of Admission’s website.</td>
</tr>
<tr>
<td>University Closed (Memorial Day)</td>
<td>May 30</td>
</tr>
<tr>
<td>University Closed (Independence Day )</td>
<td>Jul. 4</td>
</tr>
<tr>
<td>Graduation Application Due</td>
<td>Jul. 8</td>
</tr>
<tr>
<td>Last Day to Remove &quot;I&quot; Received in Spring 2016 (Full Term)</td>
<td>Aug. 12</td>
</tr>
</tbody>
</table>

**Deadlines to Remove Incomplete Grade Received in Summer 2016**

<table>
<thead>
<tr>
<th>Deadlines to Remove &quot;I&quot; Received</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>in 10 Week Term</td>
<td>Nov. 3, 2016</td>
</tr>
<tr>
<td>in First 5 Week Term</td>
<td>Sep. 25, 2016</td>
</tr>
<tr>
<td>in Second 5 Week Term</td>
<td>Nov. 8, 2016</td>
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### All terms with a May 23 start date

#### 10-Week Term - May 23 - Aug. 2

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Regular Registration</td>
<td>May 16 – 22</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>May 20 – 24, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>May 23</td>
</tr>
<tr>
<td>Late Registration</td>
<td>May 23- 24, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Change Audit Status</td>
<td></td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Jun. 30, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day to Withdraw From All Classes</td>
<td>Aug. 1, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>Aug. 2</td>
</tr>
<tr>
<td>Final Exams</td>
<td>Aug. 2</td>
</tr>
<tr>
<td>Grades Due</td>
<td>Aug. 4, by 12 noon</td>
</tr>
</tbody>
</table>

#### First 5-Week Term - May 23 - Jun. 27

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Registration</td>
<td>May 16 – 22</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>May 20 – 24, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>May 23</td>
</tr>
<tr>
<td>Late Registration</td>
<td>May 23- 24, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Change Audit Status</td>
<td></td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Jun. 10, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day to Withdraw From All Classes</td>
<td>Jun. 24, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>Jun. 27</td>
</tr>
<tr>
<td>Final Exams</td>
<td>Jun. 27</td>
</tr>
</tbody>
</table>
### All terms with a Jun. 6 start date

#### 8 Week Term - Jun. 6 - Aug. 1

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades Due</td>
<td>Jun. 29, by 12 noon</td>
</tr>
<tr>
<td>Regular Registration</td>
<td>May 18 – Jun. 5</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Jun. 3-7, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>Jun. 6</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Jun. 6-7, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Jul. 6, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day to Withdraw From All Classes</td>
<td>Jul. 29, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>Aug. 1</td>
</tr>
<tr>
<td>Final Exams</td>
<td>Aug. 1</td>
</tr>
<tr>
<td>Grades Due</td>
<td>Aug. 3, by 12 noon</td>
</tr>
</tbody>
</table>

### All terms with a Jul. 5 start date

#### Second 5-Week Term - Jul. 5 - Aug. 8

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades Due</td>
<td>Jun. 29, by 12 noon</td>
</tr>
<tr>
<td>Regular Registration</td>
<td>May 18 – Jul. 4.</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Jul. 1 – 6, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>Jul. 5</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Jul. 5 – 6, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Jul. 22, by 5 p.m.</td>
</tr>
</tbody>
</table>
### Last Day to Withdraw From All Classes
- **Aug. 5, by 5 p.m.**

### Last Day of Class
- **Aug 8**

### Final Exams
- **Aug 8**

### Grades Due
- **Aug. 10, by 12 noon**

---

## Fall 2016

### Registration Dates

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority Registration by class standing</td>
<td>Mar. 28 – Apr. 1</td>
</tr>
<tr>
<td>- Grad/Post Bacc/Seniors</td>
<td>Mar. 28 – Mar. 29</td>
</tr>
<tr>
<td>- Juniors</td>
<td>Mar. 30</td>
</tr>
<tr>
<td>- Sophomores</td>
<td>Mar. 31</td>
</tr>
<tr>
<td>- Freshmen</td>
<td>Apr. 1</td>
</tr>
<tr>
<td>Early Registration For All Students</td>
<td>Apr. 1 – August 9</td>
</tr>
<tr>
<td>Full Term Late Registration</td>
<td>Aug. 17 – 23, by 4 p.m.</td>
</tr>
</tbody>
</table>

**First 10 Week Term – 101**

- **Regular Registration**: Aug. 10 – 16
- **Late Registration**: Aug. 17 – 23, by 4 p.m.

**Second 10 Week Term – 102**

- **Regular Registration**: Aug. 10 – Sep. 25
- **Late Registration**: Sep. 26 – Sep. 30, by 4 p.m.

**First 8 Week Term – 810**

- **Regular Registration**: Aug. 10 – 16
- **Late Registration**: Aug. 17 – 19, by 4 p.m.

**Second 8 Week Term – 820**

- **Regular Registration**: Aug. 10 – Oct. 16
- **Late Registration**: Oct. 17 – 19, by 4 p.m.

**First 5 Week Term – 510**

- **Regular Registration**: Aug. 10 – 16
### Academic Calendar

**Student Records**

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Late Registration</td>
<td>Aug. 17 – 18, by 4 p.m.</td>
</tr>
<tr>
<td><strong>Second 5 Week Term – 520</strong></td>
<td></td>
</tr>
<tr>
<td>Regular Registration</td>
<td>Aug. 10 – Sep. 25</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Sep. 26 – Sep 27, by 4 p.m.</td>
</tr>
<tr>
<td><strong>Third 5 Week Term – 530</strong></td>
<td></td>
</tr>
<tr>
<td>Regular Registration</td>
<td>Aug. 10 – Nov. 6</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Nov. 7 – Nov. 8, by 4 p.m.</td>
</tr>
</tbody>
</table>

For Senior Citizen Registration Dates please see Parts of Term Below.

### General Dates

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergrad Admission Application Deadline</td>
<td>Please visit the <a href="#">Office of Admission's website</a></td>
</tr>
<tr>
<td>University Closed (Labor Day Holiday)</td>
<td>Sep. 5</td>
</tr>
<tr>
<td>Graduation Application Due</td>
<td>Oct. 7</td>
</tr>
<tr>
<td>Midterm Grade Entry Open</td>
<td>Oct. 3</td>
</tr>
<tr>
<td>GradFest (DSC Lower Level)</td>
<td>TBA</td>
</tr>
<tr>
<td>Grad Info Session (Auditorium on 1st floor – SSC)</td>
<td>Nov. 16 Noon and 5 p.m.</td>
</tr>
<tr>
<td>No Classes</td>
<td>Nov. 23</td>
</tr>
<tr>
<td>University Closed (Thanksgiving Break)</td>
<td>Nov. 24 – 27</td>
</tr>
<tr>
<td>Commencement</td>
<td>Dec. 17</td>
</tr>
</tbody>
</table>

### All terms with an August 17 start date

**Full Term (regular semester - 1) Aug. 17 - Dec. 13**

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Registration</td>
<td>Aug. 10 – 16</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Aug. 16 – 23, by 4 p.m</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>Aug. 17</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Aug. 17 – 23, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status</td>
<td>For <a href="#">payment dates</a> or <a href="#">refund schedule</a> please visit the <a href="#">Bursar's Office Website</a>.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For <a href="#">payment dates</a> or <a href="#">refund schedule</a> please visit the <a href="#">Bursar's Office Website</a>.</td>
</tr>
</tbody>
</table>
### Academic Calendar - Student Records

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Oct. 13, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>Dec. 5</td>
</tr>
<tr>
<td>Last Day to Withdraw From All Classes</td>
<td>Dec. 5, by 5 p.m.</td>
</tr>
<tr>
<td>Consultation Day</td>
<td>Dec. 6</td>
</tr>
<tr>
<td>Final Exams</td>
<td>Dec. 6 – Dec. 13</td>
</tr>
<tr>
<td>Grades Due</td>
<td>Dec. 16, by 12 noon</td>
</tr>
</tbody>
</table>

**First 10-Week Term (101) - Aug. 17 - Oct. 26**

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Registration</td>
<td>Aug. 10 – 16</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Aug. 17 – 23, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>Aug. 17</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Aug. 17 – Aug. 23, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status</td>
<td>For payment dates or refund schedule please visit the Bursar's Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For payment dates or refund schedule please visit the Bursar's Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Sep. 23, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day to Withdraw From All Classes</td>
<td>Oct. 25, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>Oct. 25</td>
</tr>
<tr>
<td>Final Exams</td>
<td>Oct. 26</td>
</tr>
<tr>
<td>Grades Due</td>
<td>Oct. 28, by 12 noon</td>
</tr>
</tbody>
</table>

**First 8-Week Term (810) - Aug. 17 - Oct. 12**

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Registration</td>
<td>Aug. 10 – 16</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Aug. 17 – 19, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>Aug. 17</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Aug. 17 – 19, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status</td>
<td>For payment dates or refund schedule please visit the Bursar's Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For payment dates or refund schedule please visit the Bursar's Office Website.</td>
</tr>
<tr>
<td>Event</td>
<td>Dates</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Sep. 16, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day to Withdraw From All Classes</td>
<td>Oct. 11, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>Oct. 12</td>
</tr>
<tr>
<td>Final Exams</td>
<td>Oct. 12</td>
</tr>
<tr>
<td>Grades Due</td>
<td>Oct. 14, by 12 noon</td>
</tr>
<tr>
<td>First 5-Week Term (510) - Aug. 17 – Sep. 21</td>
<td></td>
</tr>
<tr>
<td>Regular Registration</td>
<td>Aug. 10 – 16</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Aug. 17 – 18, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>Aug. 17</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Aug. 17 – 18, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Sep. 6, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day to Withdraw From All Classes</td>
<td>Sep. 20, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>Sep. 21</td>
</tr>
<tr>
<td>Final Exams</td>
<td>Sep. 21</td>
</tr>
<tr>
<td>Grades Due</td>
<td>Sep. 23, by 12 noon</td>
</tr>
<tr>
<td>All terms with a September 26 start date</td>
<td></td>
</tr>
<tr>
<td>Second 10-Week Term (102) - Sep. 26 – Dec. 7</td>
<td></td>
</tr>
<tr>
<td>Regular Registration</td>
<td>Aug. 10 – Sep. 25</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Sep. 26 – Sep. 30, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>Sep. 26</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Sep. 26 – Sep. 30, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For payment dates or refund schedule please visit the Bursar’s Office Website.</td>
</tr>
</tbody>
</table>
### Second 5-Week Term (520) - Sep. 26 – Oct. 28

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Registration</td>
<td>Aug. 10 – Sep. 25</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Sep. 26 – Sep. 27, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>Sep. 26</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Sep. 26 – Sep 27, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status</td>
<td>For payment dates or refund schedule please visit the <a href="#">Bursar’s Office Website</a>.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For payment dates or refund schedule please visit the <a href="#">Bursar’s Office Website</a>.</td>
</tr>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Oct. 13, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day to Withdraw From All Classes</td>
<td>Oct. 27, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>Oct. 28</td>
</tr>
<tr>
<td>Final Exams</td>
<td>Oct. 28</td>
</tr>
<tr>
<td>Grades Due</td>
<td>Nov. 1, by 12 noon</td>
</tr>
</tbody>
</table>

### All terms with an October 17 start date

#### Second 8-Week Term (820) - Oct. 17 - Dec. 14

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Registration</td>
<td>Aug. 10 – Oct. 16</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Oct. 17 – 19, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>Oct. 17</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Oct. 17 – 19, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status</td>
<td>For payment dates or refund schedule please visit the <a href="#">Bursar’s Office Website</a>.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For payment dates or refund schedule please visit the <a href="#">Bursar’s Office Website</a>.</td>
</tr>
</tbody>
</table>
### Academic calendar - Student Records

<table>
<thead>
<tr>
<th>Event</th>
<th>Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Nov. 15, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day to Withdraw From All Classes</td>
<td>Dec. 13, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>Dec. 14</td>
</tr>
<tr>
<td>Final Exams</td>
<td>Dec. 14</td>
</tr>
<tr>
<td>Grades Due</td>
<td>Dec. 16, by 12 noon</td>
</tr>
</tbody>
</table>

**All terms with a November 9 start date**

#### Third 5-Week Term (530) - Nov. 7 - Dec. 14

<table>
<thead>
<tr>
<th>Event</th>
<th>Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Registration</td>
<td>Aug. 10 – Nov. 6</td>
</tr>
<tr>
<td>Senior Citizen Registration</td>
<td>Nov. 7 – Nov. 8, by 4 p.m.</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>Nov. 7</td>
</tr>
<tr>
<td>Late Registration</td>
<td>Nov. 7 – Nov. 8, by 4 p.m.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 100% Refund; Last Day to Change Audit Status</td>
<td>For payment dates or refund schedule please visit the Bursar's Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop or Withdraw for 50% Refund</td>
<td>For payment dates or refund schedule please visit the Bursar's Office Website.</td>
</tr>
<tr>
<td>Last Day to Drop an Individual Class</td>
<td>Nov. 18, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day to Withdraw From All Classes</td>
<td>Dec. 6, by 5 p.m.</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>Dec. 7</td>
</tr>
<tr>
<td>Final Exams</td>
<td>Dec. 7</td>
</tr>
<tr>
<td>Grades Due</td>
<td>Dec. 9, by 12 noon</td>
</tr>
</tbody>
</table>
# Tuition and Fees

<table>
<thead>
<tr>
<th>Undergraduate Tuition (per credit hour)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arkansas Residents</strong></td>
<td></td>
</tr>
<tr>
<td>Per Semester Credit Hour</td>
<td>$206.00</td>
</tr>
<tr>
<td>College of Business Courses</td>
<td>$221.00</td>
</tr>
<tr>
<td>Donaghey College of Engineering and Information Technology Courses</td>
<td>$221.00</td>
</tr>
<tr>
<td><strong>Non-residents</strong></td>
<td></td>
</tr>
<tr>
<td>Per Semester Hour</td>
<td>$575.00</td>
</tr>
<tr>
<td>College of Business Courses</td>
<td>$600.00</td>
</tr>
<tr>
<td>Donaghey College of Engineering and Information Technology Courses</td>
<td>$600.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fees Per Semester Hour</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Required Fees:</strong></td>
<td></td>
</tr>
<tr>
<td>Facilities (excluding Law School)</td>
<td>$9.50</td>
</tr>
<tr>
<td>General</td>
<td>$18.25</td>
</tr>
<tr>
<td>Athletic</td>
<td>$18.75</td>
</tr>
<tr>
<td>Health Services</td>
<td>$2.50</td>
</tr>
<tr>
<td>Technology Infrastructure</td>
<td>$3.00</td>
</tr>
<tr>
<td>Application Processing (1st Time Applicant)</td>
<td>$40.00</td>
</tr>
<tr>
<td>Re-application Processing (Per re-application)</td>
<td>$15.00</td>
</tr>
<tr>
<td>Public Safety</td>
<td></td>
</tr>
<tr>
<td>Fall &amp; Spring:</td>
<td>$25.00</td>
</tr>
<tr>
<td>Summer:</td>
<td>$12.50</td>
</tr>
<tr>
<td><strong>College Technology Fees:</strong></td>
<td></td>
</tr>
<tr>
<td>Arts, Letters, and Sciences Courses</td>
<td>$12.50</td>
</tr>
<tr>
<td>Business Courses</td>
<td>$9.00</td>
</tr>
<tr>
<td>Education and Health Professions Courses</td>
<td>$10.00</td>
</tr>
<tr>
<td>Engineering and Information Technology Courses</td>
<td>$12.50</td>
</tr>
<tr>
<td>Social Sciences and Communication Courses</td>
<td>$9.00</td>
</tr>
<tr>
<td>Off-Campus Courses (includes web based courses)</td>
<td>$10.00 – $25.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Special Fees (as applicable)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus ID Card Replacement</td>
<td>$15.00-$25.00</td>
</tr>
<tr>
<td>Installment Payment Plan</td>
<td>$30.00</td>
</tr>
<tr>
<td>International Student Application</td>
<td>$40.00</td>
</tr>
<tr>
<td>International Student Service (per term)</td>
<td>$150.00</td>
</tr>
<tr>
<td>International Student Health Insurance (Market Rate)</td>
<td>per year $1,210.00</td>
</tr>
<tr>
<td>Late Installment Payment (per payment)</td>
<td>$50.00</td>
</tr>
<tr>
<td>Late Registration</td>
<td>$100.00</td>
</tr>
<tr>
<td>Library Non-student User Circulation</td>
<td>per semester $45.00</td>
</tr>
<tr>
<td></td>
<td>per year $100.00</td>
</tr>
<tr>
<td>Optional Individual Math Skills Review</td>
<td>$150.00</td>
</tr>
<tr>
<td>Returned Check</td>
<td>$20.00</td>
</tr>
<tr>
<td>Transcript (Official Copy)</td>
<td>$5.00</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Program Specific Fees</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ph.D. and Ed.D. Degree Graduation Fee</td>
<td>$80.00</td>
</tr>
<tr>
<td>Thesis Publication Fee</td>
<td>$45.00</td>
</tr>
<tr>
<td>Dissertation Publication Fee</td>
<td>$55.00</td>
</tr>
<tr>
<td>Art Studio Materials</td>
<td>$12.00</td>
</tr>
<tr>
<td>Audiology/Speech Pathology Practicum</td>
<td>$20.00</td>
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<tr>
<td><strong>Education</strong></td>
<td></td>
</tr>
<tr>
<td>Experimental Learning Fee (per course)</td>
<td>$25.00-$60.00</td>
</tr>
<tr>
<td>Praxis Testing (Dependent upon subject)</td>
<td>$65.00-$90.00</td>
</tr>
<tr>
<td>Student Teacher Practicum Supervision</td>
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</tr>
<tr>
<td>In-state</td>
<td>$210.00</td>
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<tr>
<td>Out-of-state</td>
<td>$315.00</td>
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<tr>
<td><strong>Music Private Applied Instruction</strong></td>
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<tr>
<td>half-hour lesson (1 credit hour course)</td>
<td>$60.00</td>
</tr>
<tr>
<td>one hour lesson (2 or 3 credit hour course)</td>
<td>$100.00</td>
</tr>
<tr>
<td><strong>Nursing</strong></td>
<td></td>
</tr>
<tr>
<td>Testing</td>
<td>$25.00</td>
</tr>
<tr>
<td>Clinical Nursing</td>
<td>$30.00</td>
</tr>
<tr>
<td><strong>Performing Arts Production</strong></td>
<td>$12.00</td>
</tr>
<tr>
<td><strong>Social Work Placement (per semester)</strong></td>
<td>$60.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Housing Fees</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Residence Hall</strong></td>
<td></td>
</tr>
<tr>
<td>Application Processing</td>
<td>$35.00</td>
</tr>
<tr>
<td>Security Deposit</td>
<td>$100.00</td>
</tr>
<tr>
<td>Fall and Spring Semesters (per term)</td>
<td></td>
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<tr>
<td>Double Bedroom</td>
<td>$1,854.00</td>
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<td>Single Bedroom</td>
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<tr>
<td>Laundry Fee</td>
<td>$35.00</td>
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<tr>
<td>Summer (per five-week term)</td>
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<tr>
<td>Double Bedroom</td>
<td>$489.00</td>
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<tr>
<td>Single Bedroom</td>
<td>$700.00</td>
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<td>Laundry Fee</td>
<td>$12.00</td>
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<tr>
<td><strong>Residence Life Programming Fee</strong></td>
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</tr>
<tr>
<td>Fall and Spring (per term)</td>
<td>$16.00</td>
</tr>
<tr>
<td>Summer (per term)</td>
<td>$6.00</td>
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<tr>
<td><strong>UALR-owned Houses and Apartments</strong></td>
<td></td>
</tr>
<tr>
<td>Price per month</td>
<td></td>
</tr>
<tr>
<td>a) Depending on size, furnishings, and condition.</td>
<td>$450-$800</td>
</tr>
<tr>
<td><strong>Meal Plans</strong></td>
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</tr>
<tr>
<td>Residential Plans (per term)</td>
<td>$500.00-$1,800.00</td>
</tr>
<tr>
<td>Commuter Plans (per term)</td>
<td>$100.00-$1,000.00</td>
</tr>
</tbody>
</table>
For the most accurate and comprehensive tuition and fee information, visit the Bursar’s webpage, ualr.edu/bursar/.

Tuition and fee charges for classes that are taken for audit are the same as those for credit classes. Other fees for seminars and special courses may be charged. All fees are subject to change without notice. All tuition and fees are due at the time of the student’s registration. UALR accepts MasterCard, Visa, and Discover. Students whose tuition checks are returned are subject to administrative withdrawal. Any student who is an Arkansas resident and has reached the age of 60 years or older by the last day of registration may enroll (on a space available basis) free of tuition. In such cases, special fees for certain leisure science and music instruction courses are required. Students must provide proof of age to the Office of Undergraduate Admissions.

Parking Fees
Every student who parks a motorized vehicle on the main UALR campus is required to register that vehicle with the Department of Public Safety and display a parking permit as instructed. There is no fee to register one vehicle. Permits for additional vehicles are $20 annually.

Reserved parking fees are $165.00 annually for twenty four hour access. Lot choices are lot #s 3, 4, 5, 7, 8, 9, and the lower level of the parking deck. Reserved parking is available on a first come first served basis. Reserved parking may be arranged at the Department of Public Safety. Students are also allowed to park in the metered lots or UALR’s parking deck. The fee for parking in the metered lots is $1.00 per hour with a 2-hour time limit, and the fee for the parking deck is $1.00 per exit.

Schedule Adjustment
Students who reduce their course load by dropping one or more courses may or may not be entitled to a reduction in charges. Visit boss.ualr.edu/ and choose the UALR Registration Guide and Class Schedule for the dates of the schedule adjustment period.

Tax-Deductible Educational Expenses
The cost of college educational expenses may be deductible on an individual’s federal income tax return if classes are taken:
• To maintain or improve the skills required in the individual’s trade or business, or required in performing a present job
• To meet the specific requirements of an employer or the requirements of law for retention of present employment, salary, or status
• Such that the criteria for the Hope Scholarship Credit or the Lifetime Learning Credit are met
• These credits can be applied to tax returns if the student meets the eligibility requirements.

This section should not be construed as tax advice. Students should consult a tax advisor or contact the local office of the Internal Revenue Service.

Withdrawal from UALR
Students voluntarily withdrawing from UALR must complete the University Withdrawal Form and have an exit interview with a staff member in the Office of Financial Aid if receiving financial aid. Withdrawal forms are available in the Office of Records and Registration. The last day to officially withdraw from the University without a grade penalty is listed in the Academic Calendar and on the UALR website. Students who fail to officially withdraw will be reported as having failed the course work for the semester, and grades of F will appear on their official transcripts. Students who have questions about withdrawing should contact the Office of Records and Registration.

Refund
Students who officially withdraw from UALR (withdrawal from all classes) during a regular fall or spring semester are entitled to a refund of instructional fees in accordance with the following schedule:
• 1st class day through the 5th class day – 100%
• 6th class day through the 10th class day – 50%
• After the 10th class day – No refund

To avoid charges for a summer term, a registered student must officially withdraw from all classes prior to the first day of classes for that term. Refund schedules for current terms may be found in the UALR Registration Guide and Class Schedule.

1. Non-attendance does not constitute a withdrawal.
2. An official withdrawal does not penalize or prevent a student from re-enrolling at a future date.
Academic Success Center
Kimberly Bright, Director
Speech Building, Room 101 | (501) 569-3280 | (501) 569-3420 | ualr.edu/academicsuccess/

The Academic Success Center (ASC) offers multiple services designed to assist students in learning the tools to be academically successful at UALR and use those same tools to be successful in life after graduation and is located in Speech Building 101, with hours of operation 7:30 a.m. to 6 p.m. Monday through Thursday, and 7:30 a.m. to 5 p.m. on Friday. The ASC houses 5 distinct programs:

1. The Collegiate Success Program (CSP) provides personal attention to entering first-year and transfer students needing to complete developmental Reading and Composition coursework with a two-semester, structured learning experience including workshops and/or community building activities,
2. The CSP-Academic Probation (CSP-AP) is designed to give student currently on probation the intrusive support necessary to return to satisfactory academic standing,
3. The Program for Enhanced Learning (PEL) provides developmental courses in reading and writing,
4. Student Support Services (SSS) is a federally supported program aimed at providing additional academic support and assistance to traditionally underrepresented populations, and
5. The Ronald McNair Scholars program is another federally supported program designed to help underrepresented populations do the necessary preparation to successfully apply, attend and complete a doctoral research program.

Adult Learners (Nontraditional Students)
Adult learner is defined as a student 25 years of age or older who is beginning or returning to school after being away from college for a number of years and who plans to enroll in credit courses. To respond more effectively to this group’s needs, the Office of Campus Life serves as an advocacy and referral office and assists new adult students.

The Non-Traditional Student Program (NTSP) is designed to help nontraditional students be successful in obtaining their educational goals. NTSP helps students navigate the university and provide information about resources, services and opportunities that UALR offers. Additional information may be found on the website http://ualr.edu/campuslife/ntsp/about-non-traditional-student-programs/ or by calling (501) 569-3308.

Alumni Association
The UALR Alumni Association sponsors a variety of activities for students and former students including homecoming, reunions, speaker series, and other special events. The association offers several scholarships, including one to a second-generation student, and it cosponsors GradFest each fall and spring semester. Members receive on-campus discounts and receive Daily Record, a newspaper of law and business information. The Alumni Association offers a basic membership option or membership in a specific constituency group, and is open to all former students of UALR and its predecessor institutions (Little Rock University and Little Rock Junior College) for a small annual membership fee. Visit the Bailey Alumni & Friends Center, (501) 683-7208.

Bookstore
The UALR Bookstore is located in the Donaghey Student Center complex and is the book center for the campus community. In addition to providing required and recommended textbooks, the Bookstore has a general book department with a basic selection of books, special promotions, school and office supplies, and a special order service. The gift department includes jewelry, imprinted clothing, and greeting cards. University class rings are ordered individually for graduating students. The Bookstore is managed by Barnes and Noble Bookstores, Inc., and is a member of the National Association of College Stores and the Southwest College Bookstore Association.

Campus ID Card
The UALR photo Campus Card is required to access the Donaghey Student Center Fitness and Aquatics Center, library, athletic events, and special activities, and to perform check cashing and enrollment adjustments.

The ID Card is also used as a debit card for those students on a meal plan and / or receiving book vouchers. The card may not be used by any person other than the one to whom it is issued, and it must be surrendered on the request of any official of the University. If an ID card is lost, another can be obtained at the Donaghey Student Center for a fee. Campus Cards are issued at the Donaghey Student Center during regular operating hours.

Campus Life
Students involved in the Office of Campus Life gain valuable experience in building teamwork, planning events, working with diverse personalities and populations and much more! Services, programs and events include the following:

<table>
<thead>
<tr>
<th>Allocation &amp; Administration of Student Activity Fees</th>
<th>Special Events &amp; Cultural Observances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus Recreation: Intramural Sports, Fitness/Wellness Programs &amp; Outdoor Adventures</td>
<td>Student Government Association</td>
</tr>
<tr>
<td>Diversity Programs &amp; Mentoring</td>
<td>Student Organization Registration &amp; Advisement</td>
</tr>
<tr>
<td>Fraternity/Sorority Life</td>
<td>Student Support Programs &amp; Services: Women, Non-Traditional, Commuter &amp; First Generation</td>
</tr>
<tr>
<td>Leadership Development</td>
<td>The UALR Forum Student Newspaper</td>
</tr>
<tr>
<td>New Student Orientation</td>
<td>University Program Council</td>
</tr>
<tr>
<td>Peer Tutoring Referrals</td>
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The Office of Campus Life provides advisement to all registered student organizations including those funded by the activity fee, coordinates the assignment of student organization office space, and provides student development and leadership enhancement opportunities for UALR students. The office encourages a diversity of activities designed to entertain and educate while providing opportunities for student development through extracurricular experiences. For more information, contact the Office of Campus Life (501) 569-3308.

Chancellor’s Leadership Corps

The Chancellor’s Leadership Corps is composed of approximately 60 freshmen who are selected for membership on the basis of leadership, scholarship, and service. A renewable tuition and fees scholarship is awarded to every member. The students serve as ambassadors of the University, participate in community service projects, and enjoy numerous social activities as part of a leadership practicum. Two hours of academic credit may be earned for successful completion of the practicum, which offers an orientation to campus and leadership development. For more information contact the Office of Undergraduate Admissions (501) 569-3584.

Cooperative Education

Cooperative Education is an academic program for students who would like to combine classroom study with academically related paid employment. The program allows students to complement classroom experience with employment related to their academic area of interest. Co-op creates opportunities for students locally in business, government, industry, and social service agencies. Students who participate in co-op find themselves refining research methods, applying theories in actual field settings, working with advanced technology, and designing original projects and research, all while gaining experience, making money, and earning their degrees. Students interested in Cooperative Education should contact the Office of Cooperative Education at (501) 569-3584. For additional information, visit the Co-op website at ualr.edu/co-op/.

Counseling Services

Counseling is a service provided by professionally and clinically trained mental health providers, who promote mental health and wellness within an individual, group, and community format. We assist clients who are goal oriented and want to make positive changes in their lives. Counselors guide clients in overcoming personal barriers and life stressors in meeting their personal and professional goals. We assist our clients in exploring and accessing their own strengths and equip our clients with healthy and sustainable coping skills. For more information call (501) 569-3185 or visit ualr.edu/counseling.

Disability Resource Center

The Disability Resource Center collaborates with faculty, staff, and students to make UALR accessible to everyone. Their expertise is at the intersection of disability and design, and so the DRC works with the campus community to ensure that physical, web environments are designed to be barrier-free to the extent possible. Some barriers to access can’t be removed in a timely manner, and so that’s when they work one-on-one with students to determine accommodations. This is a collaborative process between the DRC and the student, and when needed, with faculty.

The DRC believes that disability is an aspect of diversity that is integral to our society and to the UALR campus community. The DRC also believes that creating and maintaining usable, equitable, inclusive and sustainable learning environments is a shared responsibility of the campus community. Designing learning environments with usability in mind benefits all students at UALR. The ultimate indicator of our success is when students with disabilities can access their environments as seamlessly as do non-disabled students. The DRC strives to work proactively with the campus on accessibility issues by serving on many committees, and by doing presentations to colleges and departments across campus on good course design and accessibility issues.

For more information, contact Disability Resource Center by visiting ualr.edu/disability/ or call (501) 569-3143. The office is located in the Donaghey Student Center, Room 103.

Donaghey Student Center

Located at the heart of the campus, the Donaghey Student Center (DSC) supports the University of Arkansas at Little Rock in its dedication to Development, Service, and Community. The DSC provides facilities and services unique to university life. It is one of the few buildings in the nation that combines a traditional student center with a fitness and aquatics center. The staff invites all students, faculty, and alumni to explore the many activities, programs, and services that are available within the DSC.

<table>
<thead>
<tr>
<th>Administration, (Room 101)</th>
<th>(501) 569-8958</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Office</td>
<td>(501) 569-3362</td>
</tr>
<tr>
<td>Aquatics, (Room 106)</td>
<td>(501) 371-8011</td>
</tr>
<tr>
<td>Campus Life, (Room 216)</td>
<td>(501) 569-3308</td>
</tr>
<tr>
<td>Conference Services, (Room 210A)</td>
<td>(501) 569-3324</td>
</tr>
<tr>
<td>Dining Services, (Room 211B)</td>
<td>(501) 569-3361</td>
</tr>
<tr>
<td>Disability Resource Center, (Room 103)</td>
<td>(501) 569-3143</td>
</tr>
<tr>
<td>Student Life, (Room 215)</td>
<td>(501) 569-3328</td>
</tr>
<tr>
<td>Equipment Services, (Room 106D)</td>
<td>(501) 569-8284</td>
</tr>
<tr>
<td>Environmental Services, (Room 101)</td>
<td>(501) 683-7127</td>
</tr>
<tr>
<td>Fit/Well, (Room 109D1B)</td>
<td>(501) 569-3228</td>
</tr>
<tr>
<td>Information and Call Center, (Room 101A)</td>
<td>(501) 569-3362</td>
</tr>
<tr>
<td>Intramural teams, (Room 109D1C)</td>
<td>(501) 569-8078</td>
</tr>
<tr>
<td>Health Services, (Room 102)</td>
<td>(501) 569-3188</td>
</tr>
<tr>
<td>Reception Services, (Room 101D)</td>
<td>(501) 569-3413</td>
</tr>
</tbody>
</table>

Greek Organizations

UALR has a wide variety of Greek social fraternities and sororities, as well as honor and recognition societies and professional fraternities. These traditional college student organizations (called Greek organizations because of their Greek names) provide democratic, social, and leadership experience; give value beyond the college years; create an ever-widening circle of service beyond membership; answer the yearning for spiritual expression and guidance; and fill the need to belong.

Membership is by invitation, following a formal “rush week” during which each sorority and fraternity holds parties for potential members to learn about the organizations. For more information or to participate in rush week, call the Office of Campus Life, (501) 569-3308.

Health and Accident Insurance

Students are responsible for their own health and accident coverage while enrolled at UALR. An optional student group health insurance plan is offered to UALR students, their spouses, and dependent children. Information and applications are available in the Office of Health Services. Students must apply for this health insurance plan within 30 days of the first day of class for the fall term or may enroll at the beginning of the spring semester on a prorated basis for eight months. Insurance is mandatory for international students.

Health Services

Health Services is an ambulatory clinic providing cost-effective, accessible health care for students, faculty, and staff of the UALR campus community. Health Services is a department within the Division of Educational Student Services and Student Life and is conveniently located in the Donaghey Student Center (Suite 102) next to the DSC Information Desk and across from the bookstore.
Our medical staff includes board-certified Advanced Practice Nurses and Registered Nurses, as well as a Consulting Physician.

Physical examinations are not required of UALR students, but proof of immunization for measles and rubella is required of all applicants born after January 1, 1957.

Students with medical problems or physical disabilities are encouraged to fill out a brief information card at the Office of Health Services by the end of the first week of classes. All patient information is confidential.

The student health fee covers all office visits. There are additional charges for diagnostic testing/labs, certain procedures (paps), and vaccines.

**Hours of Operation**
- Monday - Friday: 8:00 a.m. - 5:00 p.m.
- By appointment, with same-day appointment availability.

**How to Access Care**
Schedule an appointment by calling (501) 569-3188.

**Housing**
Living on campus at UALR is an opportunity to be in the middle of it all. Being a part of a residential community has many perks, from a greater chance at academic success to a built-in social setting that is brimming with possibility.

Each of the four halls and the new University Village are equipped with such amenities as furnished rooms, Internet access, cable connections, and reserved student parking. And let’s not forget about laundry, fitness and recreation areas, and the UALR Dining Experience! So find out what’s in store for you at UALR – Discover UALR housing!

UALR offers a variety of housing options to meet the needs of a diverse student body. Browse the choices below to find out which one fits you best before filling out your housing application.

UALR adheres to all federal and state regulations and guidelines regarding nondiscrimination in housing. Inquiries may be made to the Office of Student Housing at (501) 661-1743.

**Information Center**
The Information & Call Center is located on the first floor of the Donaghey Student Center (DSC), Room 101. Representatives can answer questions or assist in determining offices or departments that can help you. It also maintains a master calendar of all campus activities and the Lost & Found.

**Intercollegiate Athletics**
The UALR athletic program is a member of the National Collegiate Athletic Association Division I and abides by NCAA rules and regulations. Men’s and women’s teams compete in the Sun Belt Conference. Men’s sports include baseball, basketball, cross country, tennis, and water polo. Women’s sports include basketball, cross country, soccer, swimming, tennis, track, and volleyball.

Any student interested in intercollegiate sports participation is encouraged to try out. Interested students should contact the director of athletics.

**International Student Services**
This office is responsible for foreign student orientation, assists international students regarding living and studying on an American campus, assists with housing, provides advisory services for matters involving nonacademic concerns, and helps develop programs to bring foreign and U.S. students together. The office works in cooperation with other units on campus that serve international students. For more information, phone (501) 569-3582. (See the International Services section of this catalog.)

**New Student Orientation**
Your life changes when you enter college. Your days will soon be even busier and filled with new challenges, priorities and activities. Students who become familiar with their campus, the faculty and staff, and available resources enhance their chances for success. Students admitted to UALR will receive an email invitation, at the email address provided on the admission application, to complete online orientation or attend orientation on campus. Additional information is available at ualr.edu/campuslife/orientation or you may contact the Office of Campus Life.

**Orientation Leaders**
Orientation leaders assist in a variety of activities designed to welcome new students and their families. Criteria for orientation leader selection include the ability to interact well with others and to communicate information about the University; successful scholastic achievement; and evidence of previous leadership roles. Faculty, staff, and administrators are invited to recommend students for orientation leader selection. For more information, contact the Office of Campus Life.

**Ottenheimer Library**
The Ottenheimer Library welcomes students, as well as faculty and staff. Friendly librarians and library staff are available to answer questions and assist with research. In addition to more than 500,000 books, Ottenheimer Library also features:
- Wireless access
- Computers, printers, copiers and scanners
- Laptops and iPads for personal use
- Music CDs and DVDs
- United States government and European Union publications
- Over 100 electronic databases, 30,000 electronic books, and 37,000 electronic journals, newspapers, and magazines.

The library delivers electronic copies of print articles and chapters upon demand, and can also order additional books, articles, and other materials from libraries throughout North America. Many of the library’s resources are available online and can be accessed anywhere with an Internet connection. For additional information, visit ualr.edu/library.

**Public Safety**
The UALR Department of Public Safety (DPS) is responsible for maintaining an orderly, safe environment for the pursuit of education, and it works in many ways to serve, protect, and assist the students, faculty, staff, and their guests. Police service is provided 24 hours a day, seven days a week, and University police officers are commissioned law enforcement officers with the same authority and arrest powers as city police officers. The public safety telephone number is (501) 569-3408; (501) 569-3400 for emergencies.

Public Safety provides parking and traffic control, individual assistance, crowd control at campus events, crime control, and crime prevention information. Brochures listing traffic, parking, bicycle, pet, and other regulations are available in the public safety office, and these regulations are detailed in the UALR Student Handbook. University police officers are there to help, but students are responsible for knowing and obeying University regulations.

The department should be notified immediately in the event of theft, assault, public drunkenness or other disturbances, or any other criminal, dangerous, or suspicious activity. The Student Patrol, trained students equipped with radios, flashlights, and identifying caps and badges, regularly patrol the campus buildings and parking lots and are available on request as escorts to on-campus destinations.
Emergency telephones, direct lines to the public safety dispatcher, are located around campus and their use is encouraged. These phones are in small, gray metal boxes on poles topped with flashing blue lights. Simply pick up the receiver and wait for the dispatcher to answer. UALR is in compliance with federal law requiring disclosure of statistics regarding arrests and certain crimes.

**Recreation Services**

The purpose of the University of Arkansas at Little Rock’s Office of Campus Recreation is to provide opportunities for a diversified population to recreate, exercise, and socialize through variety of programs. The Office of Campus Recreation help stimulate student learning and development as well as enhance the quality of life for the students, faculty, and staff. The Office Campus Recreations offers the following programs:

- Fitness & Wellness Classes
- Intramural Sports
- Outdoor Adventures
- Special Events

For more information call (501) 569-3228.

**Speech, Language, and Hearing Clinic**

This program provides evaluations and therapy for any student wishing assistance. The UALR Speech, Language, and Hearing Clinic is accredited in speech-language pathology and audiology and is supervised by certified speech-language pathologists and audiologists. Self, faculty, and external referrals may be made. Evaluations and therapy are scheduled at the faculty member ‘s and student’s convenience. The clinic is located in the University Plaza. Appointments may be scheduled by calling (501) 569-3155.

This clinic has the only diagnostic and rehabilitative training program in audiology in Arkansas. Audiological services include testing of hearing and communication skills, monitoring of hearing problems, hearing aid evaluations, hearing aid checks, training in speech reading, and counseling services for hearing-impaired students who may be experiencing difficulty in school because of hearing problems. Speech and language services include evaluations and therapy in disorders of articulation, language, stuttering and cluttering, voice, and organic disorders such as laryngectomy, aphasia, cerebral palsy, and cleft palate. Some services are available at a reduced charge to regularly enrolled students. In addition, referrals are encouraged from community speech- and hearing-impaired children and adults.

**Students Affected by the Military**

Students Affected by the Military (SAM) is a new UALR student organization. Its mission is to foster and develop a support and a social network for UALR students affected by the military.

SAM wants to help you

- Develop Social Networks
- Receive Outreach Services (Counseling, Advising, Help when you need it)
- Enjoy the Company of Others Who Share Your Experiences
- Achieve Your Educational Goals
- Make Your Interests Known

UALR is a chapter of the Student Veterans of America (SVA) organization. SVA is a chapter-based student veteran membership organization that provides military veterans with resources, support, and advocacy needed to succeed in higher education and post-graduation. Visit the website at ualr.edu/military/sam.

**Student Directory**

Under the provisions of the Family Educational Rights and Privacy Act of 1974 (commonly known as FERPA), you have the right to withhold the disclosure of “Directory or Public Information” listed below. This includes:

- Student’s name,
- Address,
- Telephone number,
- Date of birth,
- Major field of study,
- Enrollment status,
- Grade level,
- Dates of attendance,
- Participation in officially recognized activities and
- Sports, weight and height (for members of athletic teams only),
- Honors,
- Degrees and awards received,
- Photograph,
- Most recent educational agency or institution attended, and
- E-mail addresses.

**Student Government Association**

The UALR Student Government Association (SGA) offers an opportunity for students to play an active role in the University’s affairs and provides information on campus policies, events, and organizations, and an avenue for students to make known their feelings about campus policies.

SGA officers are selected by campus-wide election and represent the student body in the UALR University Assembly and the SGA President is a member of the Faculty Senate. The SGA appoints student members to UALR’s administrative and standing committees, provides an appeal system for parking and traffic violation tickets, maintains open lines of communication between University policy makers and students, and provides meeting space for student organizations. For more information or to become involved with the student government, call (501) 569-3210.

**Student Handbook**

Student rights, responsibilities, and behavior as well as other information on matters of conduct and due process are described in the UALR Student Handbook. This publication is given to students at orientation or may be obtained from the Office of Educational and Student Services. Students are considered to be mature individuals who neither lose the rights nor escape the responsibilities of citizenship through enrollment at UALR.

**Student Life**

The vice provost for student life has the general responsibility for coordinating services to students. These services include Student Life and Leadership Development, Dean of Students, Housing, Health Services, Disability Resource Center, Counseling and Career Planning, Judicial Affairs/Budgetary and Administrative Services, Student Services, Success Initiatives, Donaghey Student Center, Food Services, and the UALR Bookstore.

**Student Organizations**

There are more than 100 student organizations and clubs registered at UALR. These groups offer opportunities for leadership and student development experiences; recognize scholarship and leadership achievements at either the undergraduate or graduate level; and provide social experiences and opportunities to promote common interests in such areas as social action, politics, religion, philosophy, ethics, recreation, and hobbies. For a complete list of registered student organizations, or to register a student organization, contact the Office of Campus Life.
Student Publications

UALR recognizes three official student publications on campus.
1. Equinox is a student-run journal of contemporary literature and art at UALR.
2. The Forum is the UALR student newspaper. It is published weekly during the fall and spring semesters and four times during the summer.
3. Quills and Pixels is the peer-reviewed, student publication of the UALR Writers’ Network, an organization dedicated to spotlighting the importance of writing in society.

Study Abroad

Porntip Israsena, Interim Study Abroad Director
Student Services Center, Room 417, (501) 569-3376, ualr.edu/studyabroad

Study abroad at UALR offers you a unique and valuable experience—the opportunity not only to study, but also to immerse yourself in another country and culture, thus expanding your view of the world. While working to fulfill major and minor coursework requirements, you also have an unparalleled opportunity to acquire firsthand knowledge of another culture, develop or improve fluency in another language, and gain a global perspective. Your time abroad will be full of vivid and amazing experiences that you will remember for the rest of your life, no matter where you choose to go. Our students have traveled the world, from Austria and China to Costa Rica and Rwanda. The photo opportunities are just part of the big picture – UALR students are interacting with other cultures, immersing themselves, and picking up the skills necessary to thrive in an increasingly interconnected world. For more information call (501) 569-3376 or visit ualr.edu/studyabroad.

Testing Services

Brad Patterson, Director of Testing Services
Student Services Center, Room 315, (501) 569-3198
ualr.edu/testing

The primary function of the Office of Testing Services is to provide high quality assessments that adhere to national, state, and professional standards in order to validate exam results.

Testing programs include examinations for placement, credit, admission, graduate and professional schools, licensing and certification, distance education, and proctoring for students who receive accommodations.

The office maintains the policy and articulates credit for prior learning assessments such as Advanced Placement (AP), CLEP, DANTES Subject Standardized Tests (DSST), Excelsior College Examinations (ECE), International Baccalaureate (IB), and UALR Departmental Exams. Information regarding scheduling, programs, and current policy is available online at ualr.edu/testing.

University Program Council

The University Program Council (UPC) is a registered student organization that serves as a programming extension of the Office of Campus Life. UPC provides movie nights, lectures and comedians. Any student who wishes to participate in UPC may become a member. Students who participate share in the presentation of student activity programs from beginning to end and may also serve in leadership positions within the organization. UPC members have the opportunity to work with many different groups to provide programs for a diverse campus population. Graduate with the experiential education that UPC programs provide! The UPC is funded by the student activity fee and therefore, all events sponsored by the UPC are free to enrolled UALR students. UPC meets every Wednesday at 5:00 p.m. in DSC 201T. If you would like more information about University Program Council, please contact the Office of Campus Life at (501) 569-3308 or visit the website ualr.edu/campuslife/upc.

University Academic Assistance Centers

Communication Skill Center

The Communication Skill Center (CSC) helps take the panic out of public speaking! The CSC is a free campus resource devoted to helping students, faculty, and staff with all stages of the speech creation process. Our services include, but are not limited to, managing anxiety, brainstorming topics, conducting research, organizing content, outlining, designing and integrating effective presentational aids, and rehearsing traditionally, as well as via video, with personalized feedback. Additionally, we offer individualized help as well as group workshops on other communication-based skills, such as team communication, leadership communication, and conflict resolution. For more information call (501) 569-8208 or visit 201 SPCH Building.

Mathematics Assistance Centers

The Mathematics Assistance Centers (MAC I & II) are excellent places for students to study and do their homework. No appointment is necessary and the MAC I and MAC II are free to all UALR students. Each MAC is an excellent place to get help. Tutoring, DVDs and computers are available.

University Writing Center

The University Writing Center offers writing assistance to any student at any level. Computers for word processing are also available. Located in Student Union B 116, the University Writing Center is open six days a week. Hours change each semester. For more information, come by or call (501) 569-8343. You may also visit the Center for help with writing at the University Writing Center Online: ualr.edu/owl/.

Vehicle Registration and Parking

Every student who owns or operates a motorized vehicle on the campus is required to register that vehicle and display a parking permit as instructed. A student may register one vehicle for open parking free of charge. Contact the Department of Public Safety for more information on registering vehicles (501) 569-3408.
Guide to the UALR Graduate School

Ottenheimer Library, 5th Floor, (501) 569-3206, (501) 569-3039 (fax), Website

Interim Dean:
Professor Paula Casey

Associate Dean:
Dana Steele, M.Ed.

Assistant Dean:

Systems Administrator:
Larry Beachler

The UALR Graduate School operates as the central administrative unit providing leadership, coordination, and services for graduate students. Together with the individual graduate programs, departments, colleges, and Graduate Council, the Graduate School shares responsibility for program development, management, promotion, and review. Students are always welcome in the Graduate School offices on the fifth floor of the Ottenheimer Library, where staff members will gladly assist them with any questions or problems. Graduate School admissions staff processes applications, handles enrollment questions, and maintains student records. Graduate School staff also manages the graduate assistantship program, produces academic and promotional materials, assists with recruiting and marketing efforts, prepares research reports from the student database, and provides logistics support for the Graduate Council. The Graduate School also facilitates to the Graduate Student Association (GSA). The GSA advocates for graduate students and sponsors an annual research forum at which graduate students present their scholarly work.

Mission

The mission of the Graduate School is to provide leadership for developing and sustaining quality graduate programs; to promote graduate education; to facilitate student access to graduate programs; to support and promote public service, research, and sponsored programs; and to support faculty development. In keeping with the UALR mission, the Graduate School strives to carry out its mission in an environment that enhances freedom of expression, academic integrity, scholarly inquiry, and interactions among the graduate disciplines toward the goal of preparing leaders and responsible citizens. (Adopted by the UALR Graduate Council, 1989)

Organization

The UALR Graduate School as a distinct academic and administrative unit was created in 1977, although graduate course work had been offered since 1975. The dean of the Graduate School,
who reports to the Provost and Vice Chancellor for Academic Affairs. No faculty positions are assigned to the Graduate School. The day-to-day operation of individual graduate programs is the responsibility of the graduate coordinators and graduate faculty of the academic departments. The Graduate Council, the academic policy body for the Graduate School, approves admission policy, program requirements, program reviews, program and course additions and deletions, and graduate faculty.

Programs

The specific requirements and policies of each graduate degree program are described in the section of this catalog covering that program and its courses. Because of limited course offerings per semester, a student may be unable to carry a full-time load. It is essential that degree-seeking students maintain close contact with their advisors concerning the availability of course offerings.

<table>
<thead>
<tr>
<th>Graduate Program</th>
<th>Certificate or Degree Offered</th>
<th>College/Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult Education</td>
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<td>College of Education and Health Professions/ Counseling, Adult, &amp; Rehabilitation Education</td>
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<tr>
<td>Applied Communication Studies</td>
<td>Master of Arts (M.A.)</td>
<td>College of Social Sciences and Communications/Speech Communication</td>
</tr>
<tr>
<td>Applied Psychology</td>
<td>Master of Applied Psychology (MAP)</td>
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<tr>
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</tr>
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</tr>
<tr>
<td>Art</td>
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<td>College of Arts, Letters, and Sciences /Art</td>
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<tr>
<td>Program</td>
<td>Degree Level</td>
<td>College/Department</td>
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<td>College of Arts, Letters, and Sciences/Biology</td>
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<td>College of Business/ Business Information Systems</td>
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<td>Program</td>
<td>Degree Level</td>
<td>College/Department</td>
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<td>Integrated Science &amp; Mathematics</td>
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<td>Juris Doctorate/Master of Public Services (J.D. /M.P.S.)</td>
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<td>College of Education and Health Professions/ Counseling, Adult, &amp; Rehabilitation Education</td>
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<td>College of Education and Health Professions/ Teacher Education</td>
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<td>College of Education and Health Professions/ Teacher Education</td>
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<tr>
<td>Technology Innovation</td>
<td>Graduate Certificate</td>
<td>Donaghey College of Engineering and Information Technology/Information Science</td>
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</table>
Academic Policies and Procedures

It is the student’s responsibility to be familiar with the academic rules and regulations in this catalog and with departmental and program policies concerning the student's degree program. These provisions are subject to change, although students will normally be permitted to complete their programs under the regulations in effect at the time of admission.

Advisement

Advisement procedures and arrangements vary between programs, but generally, the program coordinator will assign a faculty advisor to work with each student to develop an approved program of study. Special, non-degree seeking students are advised by program coordinators for the curricula in which they are seeking admission to classes. Students must be advised each semester before enrolling. Some programs use BOSS to conduct advising, while others do it in a more informal manner.

Falsifying the Graduate School Admissions Application

UALR expects members of the university community—including applicants for admission—to be honest and professional in all of their dealings with the institution. To evaluate the credentials of an applicant, the Graduate School requires a portfolio of accurate information about the applicant’s academic, professional, and personal history. The Graduate School will take action against applicants who deliberately lie or misrepresent their backgrounds in their application materials.

If the false, misrepresented, or misleading information on the application portfolio is discovered the following time frames and actions will ensure:

- Before the application process is complete, the application will not be processed and no admission offer will be forthcoming.
- After admission and prior to enrollment, the admission offer will be rescinded.
- After admission and enrollment, the student will be administratively withdrawn from all classes and dismissed from the Graduate School; institutional financial assistance will be terminated retroactively, and all tuition and other awards made to the student must be repaid.
- After a degree or certificate has been earned, that degree or certificate will be revoked.

Under none of these circumstances will the applicant receive a refund of his/her application fee or tuition and fees. Evidence suggesting that an
applicant has lied, misrepresented, or acted to mislead reviewers with respect to any component of the applicant's background will be brought to the Dean of the Graduate School. The Dean of the Graduate School will evaluate the relevant evidence and consult with any parties involved with the application prior to making a decision regarding the disposition of the application. If the applicant/student/graduate wishes to appeal the decision, an appeal may be made to the Associate Dean of Students, after which institutional student appeals processes will be implemented. No punitive action against the applicant/student/graduate will occur until the issue is resolved.

Standard American English Requirement

Except in certain foreign language programs, Standard American English (SAE) is the language of instruction, examination, and all other forms of professional communication within graduate education at UALR. Only when communication in another language or in non-standard English is essential to the integrity of the academic process may a thesis / dissertation, major programmatic examination, or other component of the academic process be conducted in a language other than SAE. Students who wish to use a language other than SAE must secure the written permission of the Dean of the Graduate School. When a thesis/dissertation is accepted in a different language, it must contain an abstract written in SAE.

Course Audit

To audit a course means to attend class with no expectation of active involvement in class activities and, in effect, to be a spectator, not a participant. Under normal circumstances, the auditing student will not be given a grade, performance report, or evaluation of any kind. However, to receive transcript recognition for the audited course, the student must attend class with sufficient regularity to meet the instructor's minimum expectations. These expectations should be made explicit to the student early in the course. Students who audit a course must follow regular admission and registration procedures, pay full tuition and fees, and are subject to the university’s academic policies. Credits accrued through audited courses do not count toward fulfilling minimum credit degree requirements. In addition, audited courses do not count toward those needed to meet the requirements for a full- or half-time graduate assistantship. Graduate students should contact the UALR Office of Admissions and Financial Aid at (501) 569-3127 to determine the impacts of auditing a course on financial aid.

Course Load

A full-time graduate student must be enrolled for a minimum of nine credit hours per semester. A three-quarter-time graduate student must be enrolled in seven or eight hours per semester. A half-time graduate student must be enrolled in five or six hours per semester. Graduate course load for summer terms are: full-time, five hours or more; three-quarter-time, four hours; and half-time, three hours.

A student involved in equivalent academic endeavors, such as approved research projects or thesis writing, may request that the Graduate School dean certify full- or part-time status. Students must have the Graduate School dean's permission to enroll in more than 15 hours in one semester.

Schedule Changes

UALR’s schedule change procedures and deadlines are available on BOSS. Adding or dropping a course, transferring from one section to another, changing credit status in a course, or changing any other schedule must be approved by the graduate program coordinator.

Undergraduate Students in Graduate Courses

Undergraduate UALR students may enroll in up to 6 hours of graduate courses if they are within 15 hours of completing graduation
requirements, have a 3.0 GPA, and have the approval of the graduate program coordinator or appropriate department representative, course instructor, and the Graduate School dean. These courses may be used to satisfy baccalaureate degree requirements, subject to approval of the undergraduate major advisor, or they may be reserved for credit in a graduate program. The request form is available from the Graduate School or program coordinator and must be completed before registration. Passing such courses with a B or greater does NOT guarantee acceptance into any graduate program at UALR.

Transfer of Credit

Graduate credit may be granted for equivalent course work from other institutions with approval of the appropriate program coordinator and the Graduate School dean. Such credit may not exceed one half of the program requirements, exclusive of thesis or other exit project credits; must be no more than five years old; and must have a letter grade of B or greater.

Courses without letter grades (graded credit, satisfactory, pass) must be accompanied by official evidence that the grades equated to a B or greater at the institution at which they were earned. Accredited graduate programs usually accept transfer credits only from similarly accredited programs. Credit earned at an online university and for-profit institutions will be evaluated on a case-by-case basis.

Transfer grades are not computed as part of a student’s GPA. Individual programs may accept fewer transfer hours than the Graduate School maximum. Applications for transfer of credit for previous coursework must be made and recorded within 12 months of admission to the UALR Graduate School. Credits accepted for transfer will be posted when the student’s Application for Transfer Credit has been approved and forwarded by the Graduate School dean.

Courses and Credits

Courses with 5000-level numbers are dual-listed (4000/5000) for both undergraduate and graduate credit. That is, each 5000-level graduate course has a parallel 4000-level undergraduate course. UALR students who have completed a 4000-level class as part of a baccalaureate degree cannot receive credit toward a graduate degree by enrolling in the dual 5000-level course. Courses with numbers 7000 or above are designated exclusively for graduate students. Numbers 1000-4999 (undergraduate courses) and 6000 (UALR Law School program courses) are not in this Catalog. For all UALR course numbers, the second digit indicates the number of credit hours earned for the course.

Credit Limits

For most programs, no more than 40 percent of a program’s required minimum credit hours may be earned in 5000-level courses. For example, if a program requires a minimum of 30 hours, no more than 12 hours may be 5000-level and at least 18 hours must be 7000 or above. Individual programs may allow fewer 5000-level hours than the Graduate School.

Independent Study Courses

The Graduate School reserves the right to question and restrict the number of independent or directed study courses applied to graduation requirements. Individual programs may limit the number of such hours credited toward the degree.

Non-program Graduate Courses

A number of UALR departments that do not offer graduate programs offer one or more graduate courses that may serve as electives in other departments’ programs. Students wishing to apply such course credits to a degree program at UALR or elsewhere should contact program officials in advance to find out whether the course is appropriate to the contemplated degree program.
Courses Applied Toward Two Degrees

Generally, credits earned to satisfy the minimum requirements of one graduate degree may not be counted toward a second graduate degree. However, if two graduate programs require the same or similar courses, a student who has completed one of the degrees or is concurrently pursuing both degrees (such as two master’s degrees) may, with approval of the Dean of the Graduate School, request an exception to the general rule. Exceptions may not authorize duplicate credit for more than 12 hours or result in a combined total of less than 60 graduate hours for two UALR master’s degrees. Similarly, exceptions may not include courses required in the prerequisite master’s degree for admission to a doctoral program.

The concurrent Master of Business Administration/Juris Doctorate degree program is offered through the UALR College of Business Administration in conjunction with the UALR School of Law. The program allows students to earn MBA and JD degrees concurrently with less time and fewer credit hours. Contact the business administration program coordinator for more information.

The Master of Public Administration degree can also be earned in conjunction with the Juris Doctorate degree. The program allows students to earn MPA and JD degrees concurrently with less time and fewer credit hours. Contact the public administration program coordinator for more information.

Workshop Credit Limits

No more than six credit hours in workshop courses, approved by the program coordinator and Graduate School dean, may be counted toward degree requirements. Individual programs may accept fewer hours. Credit earned at virtual universities and for-profit universities will be evaluated on a case-by-case basis.

Grades and Grading Policies

The graduate grading system used by UALR is:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>excellent; The Graduate School uses the grade point average (GPA) for the program in which the student is currently enrolled and any other course taken while enrolled in the current program as the standard measure for retention and graduation requirements. The GPA is determined by assigning quality points to each letter grade (A=4, B=3, C=2, D=1, F=0), multiplying by the number of credit hours in the course, and dividing by the total number of hours attempted. The semester grade report shows both the semester GPA and a cumulative GPA based on all graduate work taken at UALR. Except when noted in the catalog, a grading scheme of CR/NC must be arranged and agreed upon by the instructor and student before the class begins. The same applies to auditing a class.</td>
</tr>
<tr>
<td>B</td>
<td>acceptable;</td>
</tr>
<tr>
<td>C</td>
<td>C and D, below acceptable standards;</td>
</tr>
<tr>
<td>D</td>
<td>failure;</td>
</tr>
<tr>
<td>I</td>
<td>I, incomplete;</td>
</tr>
<tr>
<td>IP</td>
<td>IP, in progress,</td>
</tr>
<tr>
<td>CR/NC</td>
<td>CR/NC, credit/no credit;</td>
</tr>
<tr>
<td>AU</td>
<td>AU, audit; and</td>
</tr>
<tr>
<td>W</td>
<td>W, withdrawal.</td>
</tr>
</tbody>
</table>

If grades are posted, it is done in such a way that students can identify only their own grades. Students in debt to the university will not receive a semester grade report until the debt is satisfied. The formal process to appeal a final grade decision is described in the UALR Student Handbook, found online at ualr.edu/deanofstudents/assets/archive/HANDBOOK.pdf.

In Progress (IP) Grade

An In Progress grade (IP) is used for thesis, dissertation, or other similar classes that have a time obligation that is longer than the traditional
semester or session. IP indicates that the student is making satisfactory progress in that class. Students who do not make satisfactory progress will be granted no credit. The instructor assigning the IP grade will replace it with a letter grade that reflects the quality of the finished work. In unusual circumstances, such as a student not finishing the obligation in a length of time deemed reasonable by the professor or the professor assigning the grade being unable to change the grade, the graduate coordinator, after consulting with the Graduate School dean, may change the grade to CR in the CR/NC scheme or A-C in the A-F scheme. The IP grade is distinct and different from the Incomplete (I) grade. The IP grade is not calculated into the grade point average. IP grades will be administratively converted to CR/NC or A-F, as described above, after six years have elapsed.

Repeated Courses

Only under extraordinary circumstances will a student be allowed to repeat a course in which he/she has earned a grade of C or less and only with the written recommendation of the appropriate departmental chairperson or program director, school director or college dean, and final approval by the Graduate Dean. Each subsequent course repeat must be approved separately. If there have been changes in course numbers or titles, the student must first obtain the approval of the chairperson of the department offering the course to be assured it is an identical course.

When a graduate course is repeated, the first grade remains part of the record and is computed in the final graduate GPA. Degree credit will only be granted for the course once, and that will only occur if the repeated course grade is a C or greater (i.e., a student will lose all degree credit for the course if the repeated course grade is an F). Once a degree has been awarded, no requests to repeat a course will be accepted.

Academic Probation

Graduate students who do not maintain at least a 3.0 cumulative GPA (B average) on all courses in their current program will be on academic probation at the end of the semester, regardless of whether or not they receive notification. Students who fail to remove the probationary status by raising their GPAs to 3.0 or better within 12 credit hours are subject to dismissal from the Graduate School.

Note: Some programs may have higher GPA or course program performance requirements.

Incompletes and Withdrawals

Incompletes and withdrawals are viewed unfavorably by the graduate faculty, graduate dean, and prospective employers. An incomplete (I) grade must be requested by the student and is given when the instructor deems that circumstances beyond the student’s control prevented timely completion of course requirements. An instructor does not give an incomplete (I) grade to a student who stops attending class without prior instructor approval or who fails to earn a passing grade during the course of the semester term. A written contract, signed by the instructor and student, sets the date and condition for completing the class. Most I grades can be removed within 90 days; all must be removed within one year, or these grades are converted to Fs. Students with excessive incompletes may be restricted in the number of hours they may take in a subsequent semester. A withdrawal (W) is recorded when a student drops a course after about the first week of classes or withdraws from all university course work during a semester. A pattern of class or semester withdrawals can indicate unsatisfactory progress and may lead to dismissal from the graduate program or Graduate School. (See also “Academic Probation,” “Schedule Changes,” and “Withdrawal from the University” in this section of the catalog.)

Transcript Policies

UALR transcripts are issued from the Office of Records and Registration only at the request of the student. No transcript or other evidence of
attendance is issued to or for a student who is in debt to the university. Each transcript includes the student’s complete record at UALR. Transcript requests must be made at least one week before the desired date of issue. A small fee is charged for each transcript issued. Contact the Cashier’s Office at ualr.edu/bursar. Transcripts presented for admission or evaluation of credit to UALR become part of the student’s permanent record and are not reissued. Transcripts from another institution must be sent to UALR directly from that institution.

Graduation Requirements and Policies

All UALR graduate degree programs require at least 30 hours of graduate credit and graduate certificate programs require at least 12 hours of graduate credit. All programs require a cumulative GPA of at least 3.0 on all graduate courses taken for or during that program for graduation. In extremely rare circumstances and with the approvals of their graduate coordinators and the Dean of the Graduate School, students can take up to nine hours beyond their program requirements to achieve the minimum GPAs.

Doctoral programs require a residency as described in the sections on specific degrees. The Residency Plan Form must be submitted before the end of the first semester of the residency. All requirements must be completed within seven consecutive calendar years for master’s degrees and within ten consecutive calendar years for specialist and doctoral degrees. Time lost for military service is excluded from the time requirements.

Individual programs may have additional graduation requirements or higher credit hour or GPA minimums. Students should check the graduation requirements for the specific programs listed in this catalog.

Program Advising

All degree-seeking students should work closely with their program advisors to prepare a plan of study. For doctoral students, the process may involve filing an Advancement to Candidacy notice. Students seeking degrees should meet with their advisors immediately after being admitted. The program’s advising form lists degree requirements and the plan of study for satisfying them.

Doctoral students are awarded candidacy status by their programs after demonstrating the ability to satisfy degree requirements and showing significant commitment to earning a degree through fulfilling the residency requirement. Program requirements for advancement to candidacy differ and may include cumulative or comprehensive examinations or the proposal and defense of a dissertation topic. Advancement normally is the starting point for formal dissertation work.

Graduate Student Responsibilities

Graduate students are responsible for all aspects of their academic progress and for being familiar with UALR’s graduate education policies and procedures at the programmatic, departmental, college, and university levels. These include, but are not limited to academic requirements, timetables and important dates, and research compliance and integrity issues. These requirements may be communicated in a variety of fashions, including:

- The UALR Graduate Catalog
- The university’s student handbook
- The university’s graduate handbook
- The program’s graduate student handbook
- The program’s website
- Information sent to the student’s UALR email address

For multi-institutional programs, the joint graduate student handbook and any corresponding documents from the other participating institution(s) may also apply. Each student should communicate regularly with his/her
advisor, advisory committee, and/or graduate program coordinator to ascertain clear expectations for degree or certificate completion.

Academic and Research Integrity

Academic integrity is a cornerstone value of the Graduate School at UALR. Every UALR graduate student is expected to perform his/her academic, research, artistic, scholarly, and other creative activities in a fashion reflective of the highest standards of the university, his/her profession, and a functional civil society. Academic dishonesty is considered to be a violation of those standards. Academic dishonesty involves cheating in the most general sense of the word and includes, but is not limited to the following:

- The giving or receiving of any unauthorized assistance between multiple students
- The giving or receiving of unfair advantages
- Plagiarism (i.e., claiming that one owns the ideas, calculations, words, or other work of others.)
- Falsification of data
- Attempting any of the acts described above

A student’s instructor, advisor, graduate advisory committee, program director, department chair, dean, or their representatives may initiate actions against a graduate student who is suspected of academic dishonesty. Disciplinary actions will follow procedures found in the UALR Academic Integrity and Grievance Policy (ualr.edu/policy/index.php/50113/).

UALR is equally committed to complying with all federal, state, and local laws and regulations, as well as professional and societal standards related to the ethical and honest conduct of research. The irresponsible conduct of research includes, but is not limited to, violation of laws, regulations, and professional standards in the following areas:

- Data acquisition, management, sharing, and ownership
- Conflict of interest and commitment
- Human subjects
- Animal welfare
- Research misconduct (e.g., misuse of research funds)
- Publication practices and responsible authorship

Collaborative Science

For additional information about the responsible conduct of research with respect to human and animal subjects, pathogens, chemicals, radiation, and other potentially dangerous materials, see the section on Research Compliance in the catalog. When allegations of misconduct arise in the research arena, policies and procedures found in the Research Compliance Policy will be followed. A student’s instructor, advisor, graduate advisory committee, program director, department chair, dean, or their representatives may initiate actions against a graduate student who is suspected of research misconduct, in accordance with procedures found in the UALR Academic Integrity and Grievance Policy (ualr.edu/policy/index.php/50113/).

While a student is under investigation for academic dishonesty or research misconduct, he or she may not drop a course or withdraw from the university, sit for a program examination (thesis or dissertation defense or degree capstone examination), or have his or her thesis or dissertation accepted by the Graduate School. If the student is found to have violated academic integrity, he or she may be subject to a variety of disciplinary actions, including dismissal from the Graduate School.

Research Compliance

All graduate students at UALR must perform their academic, research, artistic, scholarly, and other creative activities in compliance with federal,
state, and local laws and regulations. These activities should reflect the highest standards of the university, the student’s profession, and functional civil society. Student researchers are expected to ensure the responsible and judicious treatment of humans and animals and the safe handling of biological materials (such as recombinant DNA, living tissue, pathogens, etc).

Before collecting data that involves human subjects, animals, or biomaterial, graduate students must consult with the UALR Research Compliance Officer and submit all research protocols to the appropriate research compliance committee for review and approval. Please note: under no circumstances can compliance approval be given retroactively. Students who fail to obtain this approval before beginning their research will be considered to be in violation of research ethics as well as federal laws and regulations. As a result, he or she may face disciplinary action, including dismissal from the Graduate School. Reports of possible research compliance violations should be reported to the UALR Compliance Officer.

UALR’s Research Compliance committees include the following:

- Institutional Review Board (IRB) for human research subjects
- Institutional Animal Care and Use Committee (IACUC) for animal research subjects
- Institutional Biosafety Committee (IBC) for biological research

Without approval from one of these committees, students may not present their research findings in any public forum, including but not limited to:

- Publications in public domain literature (such as books, journals, conference proceedings, etc).
- Oral presentations at public conferences, workshops, or other meetings
- Dissertations or theses submitted to the Graduate School or ProQuest Database

Information related to UALR research compliance may be obtained from the UALR Research Compliance Office located on the fifth floor of the Ottenheimer Library. Contact the Research Compliance Officer at (501) 569-8583.

Thesis/Dissertation

If a thesis is required, it should be started at least one year before the planned graduation date. The doctoral dissertation should be commenced shortly after acceptance into the doctoral program. Document titles and the names of committee members should be filed on an Appointment of Supervisory or Examining Committee Form with the Graduate School at the beginning of their projects. The UALR Dissertation and Thesis Guidelines are available online.

Most activities in which information about humans is recorded, including all theses and dissertations and some class projects, require approval by the UALR Institutional Review Board (IRB) before they are initiated. Any project that involves vertebrate animals must have approval from the UALR Institutional Animal Care and Use Committee (IACUC) before it may be initiated. Faculty and graduate students are responsible for understanding and complying with all institutional regulations regarding human and animal subjects. Failure to obtain prior approval constitutes unethical conduct of research and has serious consequences. For additional information regarding IRB or IACUC requirements see the ORSP website or contact the chair of the appropriate committee.

The thesis/dissertation committee is chosen by the project advisor and the student. A thesis committee must comprise a minimum of three members, including the advisor; a dissertation committee must comprise a minimum of four members, including the advisor. Further parameters for committee selection can be obtained from graduate coordinators.
The Graduate School requires three bound copies of theses/dissertations (four copies for joint programs) and the electronic submission of theses and dissertations to ProQuest. Students may elect to pay for bound copies of theses/dissertations at the Cashier’s Office, and the Graduate School will forward copies for binding, or they can have copies bound for distribution to the Graduate School and campus by the appropriate deadlines. (See UALR Dissertation and Thesis Guidelines for more information and fees.) One typed, unbound copy of the completed and approved document must be delivered to the Graduate School before the planned graduation date.

After review by the Graduate School Dean, it will be returned to the student for corrections, for copying, or for binding by appropriate deadlines. Deadlines for the receipt of all graduation requirements are given on the Graduate School website at ualr.edu/gradschool. The transcript showing the degree earned will not be released until the Graduate School has received copies of the thesis or dissertation and ProQuest has received the electronic version.

Comprehensive Examination

Comprehensive examinations are required in many programs. Each program defines specifications for its examination, and the examining committee is appointed by the Graduate School dean on the recommendation of the program coordinator.

Graduation Application

Students may graduate at the end of fall, spring, or summer terms. The Graduate School Graduation Application should be completed and the graduation fee (required of doctoral students only) paid the semester before the student expects to complete degree requirements. This form certifies that all requirements have been or will be fulfilled by the graduation date, and it must be approved and signed by the program coordinator and Graduate School Dean. Timely submission of the Graduation Application is essential. (Deadlines can be found in the UALR Guide and Schedule of Classes available on BOSS) Failure to apply to graduate by the published deadline will result in the degree being awarded the following semester.

Commencement

The Graduate School expects all graduate students to participate in the Commencement Program close to or in the semester they complete degree requirements. Commencement ceremonies are conducted twice a year, at the end of the fall and spring semesters. Master’s students may participate (march) in spring commencement if they expect to graduate during the following summer terms. However, summer graduates’ names will appear in the fall graduation program. Specialist and doctoral students must be completely finished with all elements of their degrees before they may march. Caps and gowns may be ordered through the UALR Barnes and Noble Bookstore.

Academic Honors

Alpha Epsilon Lambda

UALR is home to the Zeta chapter of Alpha Epsilon Lambda, The Academic Excellence and Leadership Honor Society of Graduate and Professional School Students. Students are nominated for membership on the basis of proven leadership capabilities and an academic record placing them in the top 35% of their class.

Who’s Who Among Students

Who’s Who Among Students in American Universities and Colleges, a national honors program, recognizes exceptional students who have distinguished themselves in scholarship, citizenship, and campus and civic contributions. Students are nominated by faculty, staff, and colleagues; their biographies are reviewed by a special University committee of
faculty, staff, and students; and students selected to receive the honor are presented to the Office of Student Activities coordinator, who presents the names to be included in the national publication.

Course Attendance

All graduate students at UALR are expected to attend class regularly. Each faculty member has the right to establish requirements for attendance and participation unique to each of his/her courses. Course requirements (e.g., homework assignments, examinations, oral presentations, laboratory experiments/reports, participation in discussion, etc.) are not waived due to absence from class. Instructors may establish the academic consequences, including course failure, of excessive absences. When students will be away from class for reasons of health, family matters, or other personal or professional reasons, the student should inform the instructor at his/her earliest opportunity. The student and the instructor should discuss whether and how missed work can be made up, how the absences may affect the grade, and other academic issues.

Withdrawal from the University

Students voluntarily withdrawing from the university must complete a Withdrawal Form and an exit interview with a staff member in the Office of Records and Registration (not the Graduate School) and the Office of Admissions and Financial Aid if receiving financial aid. If unable to withdraw in person, students should contact the Office of Records and Registration. Students who fail to withdraw officially and do not complete academic assignments will be reported as having failed in their work for the semester and will receive F grades on their official transcripts.

The last day to officially withdraw from the university without a grade penalty is posted with refund information in the UALR Registration Guide and Class Schedule for each semester or term. Graduate students who have questions about voluntary withdrawal from the university should contact the Office of Records and Registration or the Graduate School dean.

Student Records and Directory Information

As custodian of educational records, the university assumes the trust and obligation to ensure the full protection of these records. The university’s policies and procedures are in full accord with the final regulations implementing the Family Educational Rights and Privacy Act of 1974. Copies of this act and its implementing regulations are on file in the Offices of the Dean of Students and Records and Registration and are on reserve in the Ottenheimer Library. Only records that are reasonably necessary or useful to the University’s purpose are maintained. Students have the right to see their records and to request amendment if necessary. Policies and procedures regarding student records are detailed in the UALR Student Handbook found online.

Student educational records maintained by the university fall into two general categories: directory information and student records. Directory information is public information and includes a student’s name; local and permanent addresses, email, and telephone numbers; photograph; date and place of birth; nationality; religious preference; marital status; parents’ or spouses’ names and addresses; participation in officially recognized activities and sports; weight and height (if athletic team member); student classification; hours enrolled in and completed; major field of study; dates of attendance; degrees, scholarships, awards, and honors received; matriculation and withdrawal dates; and most recent previous educational institution attended. This information is available to the public. The University publishes a Student Directory of enrolled students each fall. Currently enrolled students may request that all or part of their directory information not be made public by completing an appropriate request form in the Office of Records and Registration no earlier than the first or later than the eleventh day of class. This request will remain in effect until changed by the student in writing, and the data
will be treated as student records information. Please consider carefully the consequences of withholding this information. The university does not assume liability for honoring the request to withhold these records, nor does it assume responsibility to contact a student for permission to release them.

Student records information is confidential and includes all other information about a student such as grade reports, transcripts, financial aid records, etc. This information is available only to the student, university officials, and other authorized persons as described in the UALR Student Handbook.

Student Conduct

Graduate students neither lose the rights nor escape the responsibilities of citizenship through enrollment at UALR. It is expected that Graduate School students will conduct themselves professionally and honorably throughout their association with the university. It is the student’s responsibility to be familiar with the UALR Student Handbook, which details student rights, responsibilities, and expected conduct; rules and regulations of the university; and procedures for grievance, appeals, due process, etc.

In addition, students are expected to exemplify and adhere to the codes of conduct prescribed by the professional organization in their fields of study. Students who fail to adhere to these standards are subject to dismissal from their graduate program and the Graduate School.

Appeals and Grievance Procedures

Graduate programs have established processes for appeal of admission decisions and other academic matters. Admission matters are handled by the appropriate program coordinator and the Graduate School dean. Other matters may involve the appropriate department chairpersons or college deans.

Appeal and grievance procedures for academic and behavioral problems are detailed in the UALR Student Handbook, available at the Information Center and the Office of the Dean of Students or online. The Handbook outlines student rights, responsibilities, and behavior; provides information on conduct; details due process procedures for grades and other academic matters; and addresses behaviors such as cheating, plagiarism, and other breaches of acceptable conduct.

Graduate Student Association

The Graduate Student Association (GSA) provides assistance and support for new and continuing graduate students, offers leadership and organizing experiences and opportunities for creative interaction between students in different programs, and aids the Graduate School in addressing the needs and issues of its students. All graduate students, full-time or part-time, are automatically members and are encouraged to participate.

The GSA elects and appoints students to committees that perform various services for the student body and campus community. The GSA has membership in the National Association of Graduate and Professional Students.

GSA takes an active part in campus life and provides social, academic, and policy interaction among students and faculty. For example, each spring, the GSA participates in the Research Expo, at which students present creative and scholarly works to the University community. For more information about the GSA, visit the GSA website.
Graduate Admissions

Admission to graduate certificate and master’s programs in the UALR Graduate School requires a baccalaureate degree from a regionally accredited institution with substantially the same undergraduate program as at UALR (typically at least 120 hours or the equivalent of a 4-year baccalaureate degree). A 2.75 cumulative GPA is required for admission into the Graduate School. Most programs will also require a 3.0 GPA on the last 60 undergraduate hours (including post-baccalaureate hours) for admission. International students should refer to the Graduate School International Student Admission Policy for additional required application materials. Admission to an educational specialist or doctoral program usually requires a master’s degree from an accredited institution. Official transcripts, which are sent directly from the college or university that issued the degree, are required from all perspective graduate students.

Students must satisfy Graduate School requirements as well as those of the program to which they seek admission. Applications and all official transcripts should be submitted to the Graduate School as quickly as possible, as an application will not be passed on to the student’s prospective program—regardless of the program’s standards or requirements—if it does not first meet the standard Graduate School admission requirements. The section of this catalog on each degree program includes admission requirements for that program.

Some degree programs require the Graduate Record Examination, (GRE), Miller Analogies Test (MAT), or Graduate Management Admission Test (GMAT). Scores more than five years old are not accepted. Test scores alone do not determine admission to a program but are one considered piece of data. Letters of recommendation, statements of purpose, and personal interviews are also used to assess a student’s preparedness for and probability of success in a program. It is important to note that meeting all Graduate School and program requirements does not guarantee admission to a graduate certificate, master’s, specialist, or doctoral program. Applicants who do not meet all minimum admission criteria may, in rare instances, be admitted conditionally.

The Application Process

All prospective students are required to apply to the UALR Graduate School. After submitting an application, students must notify ALL institutions attended for undergraduate and, if applicable, graduate work to send official transcripts to:

University of Arkansas at Little Rock

Attention: Graduate School Ottenheimer Library – Fifth Floor
2801 South University Avenue
Little Rock, Arkansas 72204-1099
A non-refundable application fee of $40.00 is required of all first-time applicants except for McNair Scholars and military members. In addition, all applicants must submit a copy of their government-issued photo ID and proof of two MMR vaccines to the Graduate School. Please refer to the prospective program of study to find out if additional items are needed to complete the application file. International students should also see the section later in this catalog about additional application requirements.

It is the applicant’s responsibility to ensure that all admission documents are received in the Graduate School in a timely manner. All credentials submitted by or on behalf of an applicant become the property of UALR and will be retained for one year. Materials from applicants who do not submit all requested materials will be shredded and discarded.

Once an application has been submitted, applicants should notify the Graduate School of any change in plans regarding enrollment at UALR. Students admitted to the university must either enroll in the semester to which they applied, or they may defer admission for up to a year one time. In such occasions, students must officially request the deferral in writing.

Falsifying the Graduate School Admissions Application

Section 5-37-105 of the Arkansas Code makes it a misdemeanor, punishable by fine and/or imprisonment, “to present a transcript, diploma, or grade report from a post-secondary educational institution in a fraudulent manner.” Misrepresenting or deliberately lying about one’s background (including omitting any institution of higher education you have attended) or submitting inaccurate information may make applicants ineligible for admission (see Academic Policies and Procedures).

Application Deadlines

Deadlines for admission applications vary from program to program and are subject to change. Applications and all supporting materials should be submitted as early as possible. To be considered for financial aid, materials should be received by the Graduate School by:

- August 1 for fall admission;
- December 15 for spring admission; and
- May 1 for summer admission.

These dates will normally assure an admission decision in time for enrollment in the designated semester; however, specific program deadlines take precedence. For program deadlines, contact the program coordinator, the Graduate School, or the graduate program webpage.

Reaplication
It is the expectation of the Graduate School that once admitted, students will remain enrolled until they graduate. However, a graduate student who has not been enrolled for a period of two calendar years will be classified as inactive. To resume graduate study, the student must reapply for admission. Some programs have shorter periods before classifying the student as inactive. The $40.00 application fee will not be required for the new application to be processed. Applicants dismissed from, on probation, or otherwise not in good standing in another graduate or post-graduate program will not be admitted.

**Audiology and Speech Pathology**

Applications to the Master of Science in Speech Pathology program, the Doctor of Philosophy in Audiology program, and the Doctor of Philosophy in Communication Sciences and Disorders are routed through the University of Arkansas for Medical Sciences. For admission, carefully note the instructions in the program description in this Catalog.

**Undergraduate Seniors**

UALR seniors near completion of their baccalaureate degrees may apply for admission to the Graduate School, which provides limited enrollment privileges. If accepted, they will be awarded the appropriate status upon confirmation of their baccalaureate degrees. It is the student’s responsibility to inform the Graduate School of degree completion. Students may not be eligible for financial aid while being considered for admission to the Graduate School.

**Undergraduate Dual Credit Programs**

### 4+1 Early Entry Programs

Exceptional UALR undergraduate students may apply be accepted to select graduate programs and begin working toward their graduate degree while completing their baccalaureate degree. The 4+1 early entry program will allow participating students to combine their undergraduate studies with related graduate-level work. Additionally, it will enable them to complete their graduate degree in a shorter amount of time than the traditional path. To find out more about the program and its requirements, please visit the website.

### Credit Reservation Program

UALR undergraduate students may take up to six hours of graduate-level courses and reserve the credit for their graduate degree. Unlike the 4+1 program, these graduate-level courses will not count toward both the baccalaureate and the graduate degrees. Instead, the student will choose to use the credit towards either one degree or the other. Once a student’s undergraduate degree has been awarded, he or she cannot change the level of credit received for a class. Additionally, students participating in the credit reservation program do not need to
be admitted into a graduate program in order to take graduate-level courses. To find out more about the program and its requirements, please visit the website.

International Students

International students must provide credentials and detailed information before being considered for admission. Requirements are:

- **Application Form**: available on the UALR Graduate School website
- **Application Fee**: nonrefundable $40 fee must be received.
- **Academic Records**: originals or certified official copies with certified English translations of the applicant’s entire academic record in secondary school, college, or university, showing a level of achievement that satisfies the admission requirements of the Graduate School and the degree program to which the student seeks admission.
- **Articulated International Transcripts**: Required from all admitted international students,articulated transcripts must be on file at UALR prior to registration. For details on transcript articulation students should contact WES.

- **English Proficiency Certification**: applicants whose native language is not English must submit scores on the Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) with the application. Master’s or educational specialist applicants must achieve a score of 525 on the paper-based test, 197 on the computer-based version, or 71 on the Internet-based version. Doctoral applicants must achieve a score of 550 on the paper-based test, 213 on the computer-based version, or 79 on the Internet-based version. On the IELTS, all applicants must make at least a 6.5. Students who have studied full-time for two or more years at a college or university where English is the language of instruction located in a country where English is the native language may be exempt from the TOEFL or the IELTS Applicants will not be admitted as regular students nor allowed to enroll into academic programs until the requirement is met. In rare cases, international applicants may request and receive conditional acceptance to take IELP courses at UALR to assist them in making the necessary scores for regular admission into an academic program. Some programs require higher scores or other proof of proficiency such as the Test of Spoken English (TSE). TOEFL application forms and information are available from the UALR Office of Testing Services and Student Life Research (ualr.edu/testing) or from the Educational Testing Service (www.ets.org), Box 899, Princeton, New Jersey 08540 U.S.A. Information for the IELTS can be found at ielts.org/default.aspx. United States consulates and embassies may provide information. Students may also be asked to take additional tests on campus at the Office of Testing Services to demonstrate their proficiency. The Michigan Test of English Language Proficiency is given the Thursday before every UALR semester begins and costs the student $40.00.
- **Financial Statement**: students must provide certified proof that they are financially capable of pursuing an education in the US. Estimated cost for books, tuition, fees, and
living expenses will be $24,200 in U.S. currency each year. Tuition payments are due at
the beginning of each semester and do not include the cost of books, supplies, and
miscellaneous fees. In some instances, UALR will require cash deposits for tuition and
living expenses before admission is granted.

- Health and Accident Insurance: admitted students must purchase health and accident
insurance provided by UALR and maintain coverage year-round.
- Tuberculosis Screening and MMRs: all international applicants must be screened for
tuberculosis according to an Arkansas Department of Health directive. Screening can be
done at Student Health Services or through a primary care provider. All students must
also provide proof of immunization for measles, mumps, and rubella to the Graduate
School. One MMR must be provided at admission time and the other MMR is due by the
end of the first semester.
- Change of University: applicants transferring from another institution within the U.S. must
submit a Transfer and Visa Form for International Students completed by the applicant
and the foreign student advisor of the institution the applicant is currently attending.
- Deadlines: no action will be taken on an application for admission until all credentials have
been received. They must be received no later than July 1 for the fall semester and
November 1 for the spring semester, and March 1 for the summer semester. Transfer
students must have all credentials on file one month before the date of registration.

Additional Information for International Students

- Housing Facilities: UALR now has a complex dedicated to upper-class and graduate
student housing. For more information visit the housing website or contact
housing@ualr.edu.
- Employment: U.S. immigration laws do not permit international students to apply for
permission to accept off-campus employment until they have been in this country for at
least one year. Note: graduate assistants are not allowed to work off-campus.

Admission Status

If admitted, students will be placed in one of these categories:

- Regular (degree-seeking): completed and submitted all admission materials; met
Graduate School and program admission requirements.
- Conditional (degree-seeking): supplied all admission materials; did not meet all admission
requirements. Test scores, grades in the undergraduate major, or other pertinent data
must indicate the student will perform satisfactorily in graduate school. The student will be
required to fulfill the condition imposed by the Graduate School as well as any other
requirements imposed by the graduate program in which the student will be enrolled. The
Graduate School requires that students with conditional admission have a cumulative GPA
of 3.0 or higher during their first nine graded hours. In computing the above GPA, less
than nine hours cannot be used. A graded hour is defined as a regular, instructor-led
course hour and cannot include a dissertation or thesis research hour, an independent study hour, or a similar non-instructor-led course hour. The conditional status will be converted to regular admission only when the above condition and any conditions imposed by the program have been met. Regardless of whether the student satisfies one or more conditions, the student will be dismissed during the first nine hours if the GPA is not 3.0 or higher. Applicants dismissed from, on probation, or otherwise not in good standing in another graduate or post-graduate program will not be admitted. All conditions imposed by the Graduate School and the graduate program will be stated in the admission letter sent to the student qualifying for conditional admission.

- Special (non-degree-seeking): met admission requirements. For persons who want a limited number of graduate hours (nine) for professional advancement or personal enrichment. Although test scores are not usually required, transcripts are. International students may only take 6 hours. Special students are not eligible for financial aid. Special students must contact appropriate program coordinators to ensure that course prerequisites are met and for permission to enroll in specific courses. Most programs permit enrollment, if space and other resources permit, after all degree-seeking students are enrolled. Some programs limit the number of hours special students may take in the program. No more than nine hours can be earned by domestic students while classified as a special student. Special students enrolling in most classes offered by the Education programs have additional requirements. They must contact the Education program prior to enrollment. Courses taken as a special student may later be used to satisfy degree requirements at the discretion of the program faculty and Graduate School dean. Special status is not an avenue for admission to a program or enrollment in courses where an applicant has already been denied. Applicants denied admission to a program, then admitted as special students, must have special permission from both the program coordinator and the Graduate School dean to take courses in the denied program.

- Provisional (degree seeking): appear qualified for admission to program; have not submitted all required admission materials. Must provide all admission materials by end of first grading period enrolled to gain regular or conditional admission. Limited to six hours and not eligible for financial aid.

New Student Orientation

Orientation is available online at any point during the semester.

Contingent Enrollment Privilege

Students not yet admitted to the Graduate School may be granted contingent enrollment privileges (with minimum requirements of an unofficial transcript showing conferral of a baccalaureate or graduate degree) until an admission status is granted. Failure to present
adequate and official admission materials within four weeks of enrollment may result in administrative withdrawal from all courses and loss of tuition and fees, and failure to gain admission will prevent enrollment in future graduate courses. The phrase “Admitted to Graduate School” will not appear on the transcript.

Short-Term, Off-Campus, and Distance Education Courses

To enroll in graduate-level workshops, institutes, or other credit offerings through the Graduate School or Off-Campus Programs, students must apply online for admission to the Graduate School at least four weeks before the course starts and must provide evidence of admissibility before being enrolled. Applicants cannot attend a class without being enrolled. It is important that all required documents are received in the Graduate School at least one week before the course begins. Deadline dates are enforced. Application and enrollment assistance may be provided on site in some situations, but not as a rule.

In general for domestic applicants, materials for the fall semester (begins in late August), should be received by June 1; for spring semester (begins in mid-January), by October 15; for the first summer session (begins in mid-May), by March 15; for the second summer session (begins in early July), by May 1. For international applicants, materials for the fall semester (begins in late August), should be received by February 1 and for the spring semester (begins in mid-January), by October 15.
Graduate Programs

The specific requirements and policies of each graduate degree program are described in the section of this catalog covering that program and its courses. Because of limited course offerings per semester, a student may be unable to carry a full-time load. It is essential that degree-seeking students maintain close contact with their program coordinator concerning the availability of course offerings.

Graduate/Post-Graduate Certificates (TC) and Training Programs

- **Applied Statistics**, Graduate Certificate, College of Arts, Letters, & Sciences/Mathematics & Statistics
- **Building Level Administration and Supervision**, Graduate Certificate, College of Education and Health Professions/Educational Leadership
- **Business Information Systems**, Graduate Certificate, College of Business/Management
- **Conflict Mediation**, Graduate Certificate, College of Social Sciences and Communications/Institute of Government
- **Curriculum/Program Administration and Supervision**, Graduate Certificate, College of Education and Health Professions/Educational Leadership
- **Geospatial Technology**, Graduate Certificate, Donaghey College of Engineering & Information Technology/Earth Sciences
- **Gerontology**, Graduate Certificate, College of Education and Health Professions/ School of Social Work
- **Gifted and Talented Education**, Graduate Certificate, College of Education and Health Professions/Educational Leadership
- **Information Quality**, Graduate Certificate, Donaghey College of Engineering and Information Technology/Information Science
- **Literacy Intervention Specialist**, Graduate Certificate, College of Education and Health Professions/ Counseling, Adult, & Rehabilitation Education
- **Management**, Graduate Certificate, College of Business/Management
- **Literacy Coach Specialist**, Post-Master's Certificate, College of Education and Health Professions/ Teacher Education
- **Mathematics Education**, Graduate Certificate, College of Education and Health Professions
- **Nonprofit Management**, Graduate Certificate, College of Social Sciences and Communications/ Institute of Government
- **Reading Recovery Teacher**, Training Program, College of Education and Health Professions/Teacher Education
- **Reading Recovery Teacher Leader**, Training Program, College of Education and Health Professions/Teacher Education
- **Orientation and Mobility of the Blind**, Graduate Certificate, College of Education and Health Professions/Counseling, Adult, & Rehabilitation Education
- **Rehabilitation Counseling**, Graduate Certificate, College of Education and Health Professions/ Counseling, Adult, & Rehabilitation Education
- **Secondary Education**, Graduate Certificate, College of Education and Health Professions/ Teacher Education
- **Strategic Communication**, Graduate Certificate, College of Social Sciences and Communications/School of Mass Communication
- **Superintendency**, Graduate Certificate, College of Education and Health Professions
- **Systems Engineering**, Graduate Certificate, Donaghey College of Engineering & Information Technology
- **Teaching Advanced Placement**, Graduate Certificate, College of Education and Health Professions/Educational Leadership
- **Technology Innovation**, Graduate Certificate, Donaghey College of Engineering & Information Technology/Information Science

Master of Arts (M.A.)
- **Applied Communication Studies**, College of Social Sciences and Communications/Speech Communication
- **Art**, College of Arts, Letters, & Sciences /Art
- **Biology**, College of Arts, Letters, & Sciences/Biology
- **Chemistry**, College of Arts, Letters, & Sciences/Chemistry
- **Counseling: Rehabilitation Counseling**, College of Education and Health Professions/ Counseling, Adult, & Rehabilitation Education
- **Criminal Justice**, College of Social Sciences and Communications/Criminal Justice
- **Higher Education**, College of Education and Health Professions/ Educational Leadership
- **Interdisciplinary Studies**, College of Arts, Letters, & Sciences/English
- **Mass Communication**, College of Social Sciences and Communications
- **Professional & Technical Writing**, College of Social Sciences and Communications/Rhetoric and Writing
- **Public History**, College of Arts, Letters, & Sciences/History
- **Rehabilitation of the Blind**, College of Education and Health Professions/ Counseling, Adult, & Rehabilitation Education
- **Second Languages**, College of Arts, Letters, & Sciences/ International & Second Language Studies

**Master of Accounting (MAcc)**

- **Accountancy**, College of Business/Accounting

**Master of Business Administration (M.B.A.)**

- **Business Administration**, College of Business

**Master of Education (M.Ed.)**

- **Adult Education**, College of Education and Health Professions/ Counseling, Adult, & Rehabilitation Education
- **Counselor Education**, College of Education and Health Professions/ Counseling, Adult, & Rehabilitation Education
- **Curriculum & Instruction**, College of Education and Health Professions/ Teacher Education
- **Educational Administration & Supervision**, College of Education and Health Professions/ Educational Leadership
- **Learning Systems Technology**, College of Education and Health Professions/ Educational Leadership
- **Middle Childhood Education**, College of Education and Health Professions/ Teacher Education
- **Reading**, College of Education and Health Professions/ Teacher Education
- **Secondary Education**, College of Education and Health Professions/ Teacher Education
- **Special Education**, College of Education and Health Professions/Teacher Education
- **Teaching the Gifted & Talented**, College of Education and Health Professions/ Teacher Education

**Educational Specialist (Ed.S.)**

- **Educational Administration & Supervision**, College of Education and Health Professions/ Educational Leadership
- **Reading**, College of Education and Health Professions/ Teacher Education

**Master of Public Administration (M.P.A.)**

- **Public Administration**, College of Social Sciences and Communications/Institute of
Government

Master of Public Service (M.P.S.)

- **Public Service**, Clinton School of Public Service

Master of Science (M.S.)

- **Applied Science**, College of Arts, Letters, & Sciences/Applied Science
- **Bioinformatics**; also at UAMS, UALR consortium, Donaghey College of Engineering & Information Technology/Information Science
- **Biology**, College of Arts, Letters, & Sciences/Biology
- **Business Information Systems**, College of Business/Management
- **Chemistry**, College of Arts, Letters, & Sciences/Chemistry
- **Communication Sciences & Disorders**; also at UAMS, UALR consortium, College of Education and Health Professions/Audiology & Speech Pathology
- **Computer Science**, Donaghey College of Engineering & Information Technology
- **Construction Management**, Donaghey College of Engineering & Information Technology/Construction Management and Civil and Construction Engineering
- **Criminal Justice**, College of Social Sciences and Communications/Criminal Justice
- **Health, Human Performance and Sport Management**, College of Education and Health Professions
- **Information Quality**, Donaghey College of Engineering and Information Technology/Information Science
- **Integrated Science & Mathematics**, Donaghey College of Engineering & Information Technology
- **Mathematical Sciences**, College of Arts, Letters, & Sciences
- **Systems Engineering**, Donaghey College of Engineering & Information Technology

Master of Social Work

- **Social Work**, College of Education and Health Professions/School of Social Work

Juris Doctorate (J.D.)

- **Law**, Bowen School of Law
- **Juris Doctorate/Master of Public Services (J.D. /M.P.S.)**, Bowen School of Law/Clinton School of Public Service

Doctor of Audiology (Au.D.)

- **Audiology**; also at UAMS, UALR consortium, College of Education and Health Professions/Audiology & Speech Pathology

Doctor of Education (Ed.D.)

- **Higher Education**, College of Education and Health Professions/Educational Leadership
- **Educational Administration & Supervision**, College of Education and Health Professions/Educational Leadership

Doctor of Philosophy (Ph.D.)

- **Applied Science**, College of Arts, Letters, & Sciences/Applied Science
- **Bioinformatics**, Donaghey College of Engineering & Information Technology/Information Science
Science

- **Communication Sciences & Disorders**, also at UAMS, UALR consortium, College of Education and Health Professions/ Audiology & Speech Pathology
- **Criminal Justice**, College of Social Sciences and Communications/Criminal Justice
- **Engineering Science and Systems**, Donaghey College of Engineering and Information Technology/Systems Engineering
- **Integrated Computing**, Donaghey College of Engineering and Information Technology
- **Reading**, College of Education and Health Professions/ Teacher Education
Financing Graduate Education

Applicants must be fully admitted with regular admission status at UALR as degree-seeking students to be eligible for any form of financial aid. Graduate students are not eligible for the Pell Grant, Supplemental Educational Opportunity Grant, or Arkansas Student Assistance Grant.

Office of Financial Aid

The UALR Office of Financial Aid provides applications, information, and assistance on federal and other aid programs. Most financial aid is not automatically renewed; students must reapply each academic year. For more information, contact the Office of Financial Aid at (501) 569-3035 or online.

Graduate Assistantships

Graduate assistantships are available through graduate programs or departments. To qualify, students must be regularly admitted to a degree-granting graduate program and be recommended by the program coordinator. They must also have a minimum course load of nine graduate hours for a full-time assistantship or six graduate hours for a part-time assistantship.

Audited courses and undergraduate courses will not count toward the course hour requirement and are not covered by the tuition credit. Students who drop below the hour requirement by withdrawing from one or more courses are no longer eligible for graduate assistantships. To keep their assistantships, graduate assistants must remain in good academic standing with a cumulative GPA of 3.0 or above.

Assistantships usually include a full or partial tuition scholarship and a stipend of at least $6,450 (20 hours per week for two semesters) or $3,225 (ten hours per week for two semesters). Some programs offer a larger stipend. Assistantships generally are not available for the summer terms. Assistantships do not cover UALR fees.

Duty assignments vary, but most involve either teaching or research responsibilities at UALR and cooperating agencies. Whenever possible, assignments contribute to the student’s field of study. For more information, see ualr.edu/gradschool or contact the appropriate program coordinator.

Federal Aid Programs

To apply for federal aid, students must complete a current Free Application for Federal Student Aid (FAFSA). The priority deadline for financial aid applications for the fall semester is March 1, and November 1 for the spring semester. Once the application has been processed and need analysis information determined, the applicant will receive an award notification that includes
the types and amounts of aid awarded, specific program information, student responsibilities, and conditions governing the award.

Note: federal aid eligibility will be reduced if the student receives assistance from any other sources, including graduate assistantships, scholarships, grants, employee discounts, etc.

Other Types of Aid

Tuition Deferment Plan

This payment plan is available through the UALR cashier’s office; students must pay a $25 nonrefundable processing fee. The deferment plan is available for Fall and Spring semesters only.

Payroll Deduction

University employees may pay tuition and fees for themselves, their spouse, or their dependents via payroll deduction. Contact the cashier’s office as early as possible before the semester starts.

Scholarships

Scholarships are available for both full- and part-time students through the UALR Office of Development and various UALR schools and colleges. To apply, complete a UALR Scholarship Application and the scholarship applications required by the various schools and colleges. Deadlines for scholarships may vary. Find out more online.

Veterans Benefits

The U.S. Department of Veterans Affairs is authorized by law to provide a wide range of benefits to those who have served their country in the armed forces and to their dependents. Veterans seeking application materials or information on eligibility for VA educational benefits should contact the veterans certifying official in the UALR Office of Veterans Affairs, (501) 569-8171, vavets@ualr.edu, and online.
Graduate Programs

The specific requirements and policies of each graduate degree program are described in the section of this catalog covering that program and its courses. Because of limited course offerings per semester, a student may be unable to carry a full-time load. It is essential that degree-seeking students maintain close contact with their program coordinator concerning the availability of course offerings.

- Graduate/Post-Graduate Certificates (TC) and Training Programs

  - **Applied Statistics**, Graduate Certificate, College of Arts, Letters, & Sciences/Mathematics & Statistics
  - **Building Level Administration and Supervision**, Graduate Certificate, College of Education and Health Professions/Educational Leadership
  - **Business Information Systems**, Graduate Certificate, College of Business/Management
  - **Conflict Mediation**, Graduate Certificate, College of Social Sciences and Communications/Institute of Government
  - **Curriculum/Program Administration and Supervision**, Graduate Certificate, College of Education and Health Professions/Educational Leadership
  - **Geospatial Technology**, Graduate Certificate, Donaghey College of Engineering & Information Technology/Earth Sciences
  - **Gerontology**, Graduate Certificate, College of Education and Health Professions/School of Social Work
  - **Gifted and Talented Education**, Graduate Certificate, College of Education and Health Professions/Educational Leadership
  - **Information Quality**, Graduate Certificate, Donaghey College of Engineering and Information Technology/Information Science
  - **Literacy Intervention Specialist**, Graduate Certificate, College of Education and Health Professions/ Counseling, Adult, & Rehabilitation Education
  - **Management**, Graduate Certificate, College of Business/Management
  - **Literacy Coach Specialist**, Post-Master’s Certificate, College of Education and Health Professions/Teacher Education
  - **Mathematics Education**, Graduate Certificate, College of Education and Health Professions
  - **Nonprofit Management**, Graduate Certificate, College of Social Sciences and Communications/Institute of Government
  - **Reading Recovery Teacher**, Training Program, College of
Education and Health Professions/Teacher Education
- **Reading Recovery Teacher Leader**, Training Program, College of Education and Health Professions/Teacher Education
- **Orientation and Mobility of the Blind**, Graduate Certificate, College of Education and Health Professions/Counseling, Adult, & Rehabilitation Education
- **Rehabilitation Counseling**, Graduate Certificate, College of Education and Health Professions/ Counseling, Adult, & Rehabilitation Education
- **Secondary Education**, Graduate Certificate, College of Education and Health Professions/ Teacher Education
- **Strategic Communication**, Graduate Certificate, College of Social Sciences and Communications/School of Mass Communication
- **Superintendence**, Graduate Certificate, College of Education and Health Professions
- **Systems Engineering**, Graduate Certificate, Donaghey College of Engineering & Information Technology
- **Teaching Advanced Placement**, Graduate Certificate, College of Education and Health Professions/Educational Leadership
- **Technology Innovation**, Graduate Certificate, Donaghey College of Engineering & Information Technology/Information Science

- Master of Arts (M.A.)
- **Applied Communication Studies**, College of Social Sciences and Communications/Speech Communication
- **Art**, College of Arts, Letters, & Sciences /Art
- **Biology**, College of Arts, Letters, & Sciences/Biology
- **Chemistry**, College of Arts, Letters, & Sciences/Chemistry
- **Counseling: Rehabilitation Counseling**, College of Education and Health Professions/ Counseling, Adult, & Rehabilitation Education
- **Criminal Justice**, College of Social Sciences and Communications/Criminal Justice
- **Higher Education**, College of Education and Health Professions/ Educational Leadership
- **Interdisciplinary Studies**, College of Arts, Letters, & Sciences/English
- **Mass Communication**, College of Social Sciences and Communications
- **Professional & Technical Writing**, College of Social Sciences and Communications/Rhetoric and Writing
- **Public History**, College of Arts, Letters, & Sciences/History
- **Rehabilitation of the Blind**, College of Education and Health Professions/ Counseling, Adult, & Rehabilitation Education
- **Second Languages**, College of Arts, Letters, & Sciences/ International & Second Language Studies

- Master of Accounting (MAcc)
- **Accountancy**, College of Business/Accounting

- Master of Business Administration (M.B.A.)
- **Business Administration**, College of Business

- Master of Education (M.Ed.)
- **Adult Education**, College of Education and Health Professions/ Counseling, Adult, & Rehabilitation Education
- **Counselor Education**, College of Education and Health Professions/ Counseling, Adult, & Rehabilitation Education
- **Curriculum & Instruction**, College of Education and Health Professions/ Teacher Education
- **Educational Administration & Supervision**, College of Education and Health Professions/ Educational Leadership
- **Learning Systems Technology**, College of Education and Health...
- **Educational Specialist (Ed.S.)**
  - **Educational Administration & Supervision**, College of Education and Health Professions/ Educational Leadership
  - **Reading**, College of Education and Health Professions/ Teacher Education

- **Master of Public Administration (M.P.A.)**
  - **Public Administration**, College of Social Sciences and Communications/Institute of Government

- **Master of Public Service (M.P.S.)**
  - **Public Service**, Clinton School of Public Service

- **Master of Science (M.S.)**
  - **Applied Science**, College of Arts, Letters, & Sciences /Applied Science
  - **Bioinformatics**, also at UAMS, UALR consortium, Donaghey College of Engineering & Information Technology/Information Science
  - **Biology**, College of Arts, Letters, & Sciences/Biology
  - **Business Information Systems**, College of Business/Management
  - **Chemistry**, College of Arts, Letters, & Sciences/Chemistry
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  - **Construction Management**, Donaghey College of Engineering & Information Technology/Construction Management and Civil and Construction Engineering
  - **Criminal Justice**, College of Social Sciences and Communications/Criminal Justice
  - **Health, Human Performance and Sport Management**, College of Education and Health Professions
  - **Information Quality**, Donaghey College of Engineering and Information Technology/Information Science
  - **Integrated Science & Mathematics**, Donaghey College of Engineering & Information Technology
  - **Mathematical Sciences**, College of Arts, Letters, & Sciences
  - **Systems Engineering**, Donaghey College of Engineering & Information Technology

- **Master of Social Work**
  - **Social Work**, College of Education and Health Professions/ School of Social Work

- **Juris Doctorate (J.D.)**
  - **Law**, Bowen School of Law
- **Juris Doctorate/Master of Public Services (J.D. /M.P.S.),** Bowen School of Law/Clinton School of Public Service

- Doctor of Audiology (Au.D.)

- **Audiology;** also at UAMS, UALR consortium, College of Education and Health Professions/Audiology & Speech Pathology

- Doctor of Education (Ed.D.)

- **Higher Education,** College of Education and Health Professions/ Educational Leadership

- **Educational Administration & Supervision,** College of Education and Health Professions/ Educational Leadership

- Doctor of Philosophy (Ph.D.)

- **Applied Science,** College of Arts, Letters, & Sciences /Applied Science

- **Bioinformatics,** Donaghey College of Engineering & Information Technology/Information Science

- **Communication Sciences & Disorders;** also at UAMS, UALR consortium, College of Education and Health Professions/ Audiology & Speech Pathology

- **Criminal Justice,** College of Social Sciences and Communications/Criminal Justice

- **Engineering Science and Systems,** Donaghey College of Engineering and Information Technology/Systems Engineering

- **Integrated Computing,** Donaghey College of Engineering and Information Technology

- **Reading,** College of Education and Health Professions/ Teacher Education
College of Arts, Letters, & Sciences

Fine Arts, Suite 210, (501) 569-3296

Professor Shearle Furnish, Dean

Professor Tito Viswanathan, Associate Dean for Graduate Studies

By melding the classic arts and letters disciplines with science programs, the College of Arts, Letters, and Sciences is the academic centerpiece of the campus. There are 139 faculty and 40 staff members in the 11 academic areas of the new college, which include:

- Art
- Biology
- Chemistry
- English
- History
- International Studies and Second Languages
- Mathematics and Statistics
- Music
- Theatre and Dance
- Philosophy and Interdisciplinary Studies
- Physics

<table>
<thead>
<tr>
<th>Program</th>
<th>Certificate or Degree Program</th>
<th>Department/School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Psychology</td>
<td>Master’s (M.A.)</td>
<td>Psychology</td>
</tr>
<tr>
<td>Art</td>
<td>Master’s (M.A.)</td>
<td>Art</td>
</tr>
<tr>
<td>Public History</td>
<td>Master’s (M.A.)</td>
<td>History</td>
</tr>
<tr>
<td>Interdisciplinary Studies</td>
<td>Master’s (M.A.)</td>
<td>Interdisciplinary</td>
</tr>
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<td>Second Languages</td>
<td>Master’s (M.A.)</td>
<td>International and Second Languages</td>
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<td>Degree</td>
<td>Program Type</td>
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<td>Master’s (M.S.)</td>
<td>Interdisciplinary</td>
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<td>Doctorate (Ph.D.)</td>
<td>Interdisciplinary</td>
</tr>
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<td>Certificate</td>
<td>Mathematics and Statistics</td>
</tr>
<tr>
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<td>Master’s (M.S.) Master’s (M.A.)</td>
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</tr>
<tr>
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<td>Master’s (M.S.) Master’s (M.A.)</td>
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<tr>
<td>Integrated Science and Mathematics</td>
<td>Master’s (M.S.)</td>
<td>Interdisciplinary</td>
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<td>Mathematical Sciences</td>
<td>Master’s (M.S.)</td>
<td>Mathematics and Statistics</td>
</tr>
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</table>
Stabler Hall, Room 602 (501) 569-3171

Master of Applied Psychology

The Master of Applied Psychology (MAP) program offers preparation for careers in industrial/organizational and health psychology. The program may also serve students seeking a master’s degree as preparation for doctoral study in an area of experimental psychology (e.g., social, cognitive, or developmental psychology) as well as students who wish to teach at the community college level. More information about the program, the faculty, and student opportunities is available on the website.

Program Tracks

The Master of Applied Psychology is offered in three areas of concentration: (1) industrial/organizational psychology, (2) health psychology, and (3) general experimental psychology.

- The **industrial/organizational track** (41 hours) focuses on the application of psychological methods and theories in business and organizational settings. This track stresses personnel selection, personnel program evaluation, training, and organizational development.
- The **health psychology track** (42 hours) prepares individuals to pursue careers at the master’s level in the field of health psychology or behavioral medicine. Health psychology is concerned with providing educational, scientific, and professional contributions of the discipline of psychology to the promotion and maintenance of health, as well as the prevention and treatment of illness and related dysfunction.
- The **experimental psychology track** (42 hours) prepares students who intend to apply to Ph.D. programs in an area of experimental psychology (e.g., social, cognitive, or developmental psychology). It is also intended for those who wish to teach psychology at the community college level.

Admission Requirements

**Regular Admission**

Each fall, we will accept students into the master’s program based on space availability and the
applicant’s ability to meet program admission requirements. To be considered for admission, you must meet the following requirements:

1. Completed a bachelor’s degree from a regionally accredited undergraduate program;
2. Maintained a cumulative grade point average (GPA) or 3.0 in undergraduate degree;
3. Completed at least 3 hours of undergraduate psychology coursework with an understanding of the broad field of psychology;
4. Completed undergraduate course work (at least 6 hours) in statistics and research methods receiving at least a “B” in each of those courses;
5. Received at least the following on the Graduate Record Examination (GRE): 151 GRE-Verbal and 146 GRE-Quantitative Reasoning with at least a 3.5 on the Analytical Writing.
6. Submitted a letter of intent. Applicants must submit a letter of intent describing the field or specialty within psychology for which they are seeking graduate preparation. The letter should also include a description of how the proposed training relates to the applicant’s career goals.
7. Submitted letters of recommendation. Applicants should obtain three letters of recommendation from college or university faculty familiar with the applicant’s academic work. These letters should be on college or university letterhead and sent directly to the UALR Graduate School.

Conditional Admission

Occasionally, otherwise qualified prospective students might not meet the criteria related to undergraduate coursework or GRE scores. Materials will be reviewed by the program faculty for individual merit. Students may be admitted conditionally with the provision that they take and pass with at least a B up to 6 hours specified by the program coordinator during their first semester (e.g., PSYC 7330 Advanced General Psychology, EDFN 7304 Basic Statistics, etc.). These courses could be considered electives towards the overall Master’s degree requirements. Students admitted on a conditional basis are not eligible for scholarships or other graduate assistance through the department until they are admitted regularly.

Application Procedures

All materials may be mailed to UALR Graduate School, 2801. S. University Ave., Little Rock, AR 72204 or emailed to gradschool@ualr.edu.

Applications for admission to the MAP program are evaluated on a competitive basis by the program faculty and acceptance is conferred to the most qualified applicants. Fulfilling admission prerequisites and requirements is necessary to be considered, but does not guarantee acceptance.

Applications for admission should be received by the UALR Graduate School by March 15 for students anticipating beginning the following fall semester. Applications received after March 15
will be considered as long as space is available.

**Financial Aid**

A limited number of graduate assistantships are available in the Psychology department. Inquiries for one of these assistantships should be directed to the department at (501) 569-3171. In addition to graduate assistantships, there are several scholarship opportunities available to students. Information on these scholarship opportunities is available from the Office of Admissions and Financial Aid.

**Program Requirements**

Comprehensive exams are required for both the Industrial/Organizational Psychology and the Health Psychology tracks unless the student chooses to pursue a thesis as an elective. A thesis is required for the Experimental Psychology track. Successful defense of a thesis or successful completion of comprehensive exams is required for graduation with a Master’s of Applied Psychology.

**MAP Core – All tracks require the following (11 hours):**

- PSYC 7455 Research Methods and Design in Psychology
- PSYC 7340 Advanced Behavioral Statistics
- PSYC 5460 Psychological Tests: Composition and Interpretation

**I/O Psychology (Additional 30 hours)**

- PSYC 5363 Organizational Psychology
- PSYC 5310 Counseling Psychology
- PSYC 5325 Personnel Psychology
- PSYC 7350 Training and Development
- PSYC 7380 Human Factors Engineering
- PSYC 7361 Social Psychology
- PSYC 7371 Professional Issues and Ethics in Psychology
- PSYC 7369 Internship
- 6 hours electives

**Health Psychology (Additional 31 hours)**

- PSYC 5385 Psychology and Public Health
- PSYC 5340 Shaping of Human Behavior
- PSYC 7370 Health Psychology
- PSYC 5300 Drugs and Behavior
- PSYC 7385 Introduction to Clinical Methods
PSYC 7361 Social Psychology
PSYC 7480 Cognitive Psychology
PSYC 7369 Internship or PSYC 7398 Practicum in Applied Psychology
6 hours electives

Experimental Psychology (Additional 31 hours)
PSYC 7361 Social Psychology
PSYC 7480 Cognitive Psychology
PSYC 8600 Thesis
18 hours electives (to be selected with program coordinator)

Graduation Requirements

- Successful completion of degree requirements with a GPA of 3.0 or greater
- Sufficient level of mastery, as determined by successful performance on the comprehensive examination administered at the completion of the MAP program; OR successful defense of a master's thesis
Art

Fine Arts Building, Room 251, (501) 569-3182

Master of Arts in Art

The Master of Arts in Art program offers three concentrations: art history, studio art, and art education. For detailed information about the programs, visit the M.A. in Art website. The program is housed in the Department of Art, which is accredited by the National Association of Schools of Art and Design.

Art history is designed for persons interested in professional, academic, museum studies, or arts management careers and prepares students for doctoral study. It offers a broad-based study of the history of visual expression and opportunities for advanced research projects. Art historians analyze and articulate the meaning and form of human experience as embodied in works of art. The field encompasses the world of art and architecture as it exists today and has been understood visually and verbally in the past.

Studio art prepares persons to practice art in a professional capacity, to teach art, and for further study toward the terminal Master of Fine Arts degree. It offers professional development in a major art field and skill development for certified teachers of art. Major studio fields include drawing, painting, printmaking, photography, illustration and graphic design, sculpture, and ceramics. This concentration is designed for those with the potential to sustain productive careers as artists and who will continue to produce, exhibit, and approach their work critically.

Art education provides advanced experiences specific to art instruction for persons who come from a wide range of educational settings. Students gain a better understanding of the history of art education, various teaching philosophies and curricular approaches, theories of teaching and learning, assessment of children’s art progress, teacher and program assessment, and research. This concentration does not lead to teaching licensure.

Admission Requirements

Prospective applicants are encouraged to schedule an interview with the program coordinator before applying, although this is not required. All application materials are due by April 1 for the fall semester and November 1 for the spring semester.

Official transcripts, GRE scores (if used), and letters of recommendation should be sent to the
UALR Graduate School. Other requirements should be sent to the program coordinator in the Department of Art.

Admission requirements are as follows:

- Baccalaureate degree from an accredited institution with a cumulative GPA of 2.75 (4.0 scale) or 3.0 in the last 60 hours
- Two letters of recommendation (optional for students who have taken art courses at UALR during the three years previous to the application)
- Statement of objectives and goals (500-1,000 words)
- Graduate Record Examination (GRE) score is optional and may be submitted to bolster the application. (Application forms for some financial aid offered through UALR require information about the GRE score.)

Art History Additional Requirements:

- Undergraduate research paper. (preferably treating an art historical problem but may be in a related area such as literature, history, cultural or intellectual history, anthropology, or aesthetics)
- 18 undergraduate art history hours.

Studio Art Additional Requirements:

- CD Portfolio of 20 images
- 36 undergraduate art hours, including 15 in the major area and 9 in art history (18 major area hours for illustration and graphic design)

Art Education Additional Requirements:

- CD Portfolio of 20 images. (Not more than 8 images of the 20 may be of the students’ work. The applicant’s work must be clearly labeled.)
- 21 hours of studio art and a minimum of 9 hours in art history.

Transfer Credit

Up to six graduate hours with grades of B or greater earned in the past five years may be transferred from another accredited institution.

Special Students

Students admitted to the Graduate School as a special student, but not the art program, may enroll in courses only with the coordinator’s and instructor’s permission. If later admitted to the
Art program, the student may not apply more than six hours (with grades of B or greater) toward program requirements.

Graduate Assistantships

A limited number of graduate assistantships are available. Contact the program coordinator for information.

Program Requirements

All students must maintain at least a 3.0 GPA. Only twelve hours at the 5000 level may count toward the degree; all remaining hours must be 7000-level. Grades of “incomplete” are discouraged, and students with one or more “incompletes” may be restricted in the number of hours they may take in a subsequent semester. An Advancement to Candidacy Examination or Critique is required. Students are also expected to participate regularly in special seminars and workshops and to attend lectures and gallery openings organized by the department.

Art History (ARHA)

The art history concentration requires 30 graduate credit hours, including 5300 Studies in the History of Art; 9 additional 5000-level art history lecture hours; 3 hours each in Renaissance and Baroque, 18th- and 19th-century, and 20th-century art; 6 approved elective hours; and a thesis with oral defense.

The thesis topic must be selected before completing 21 hours and must be approved by the thesis advisor and program coordinator before it is submitted to the Graduate School dean. The thesis must demonstrate the candidate’s capacity for high-level, independent research. In addition, it must conform to the deadlines, requirements, and standards of the Department of Art and Graduate School. Thesis regulations are available from the program coordinator.

Students who intend to complete degree requirements during the summer must anticipate professional absences for at least part of the summer.

Language Requirement

In addition, students must demonstrate proficiency in a foreign language. A reading knowledge of French or German is normally expected. Proficiency may be demonstrated by successful completion of an undergraduate intermediate level course, or showing that level of proficiency on an examination approved by the Department of International and Second Language Studies. This should be done as early as possible in the course of study.
The Advancement to Candidacy Exam must be taken when the student has successfully completed between 9 and 15 program hours. It includes slide identifications of major monuments from all periods and several essays covering material from various periods. Upon completion of the exam, the faculty may advise the student to continue in the program or repeat earlier course work, or the student may be dismissed from the program.

Sample Program

May be adapted to individual student’s qualifications.

ARHA 5300 Studies in the History of Art
ARHA 5305, 5306, 5384, 7315, or 7316
ARHA 5307 or 7327
ARHA 5308, 5387, or 7328
9 additional art history hours
6 elective hours (art history, studio art, or other approved)
ARHA 7399 Thesis

Studio Art (ARST)

The studio art concentration requires at least 36 graduate credit hours, including 18 hours in a major studio field (or 12 major and 6 minor hours); 9 art history hours; 3 approved liberal arts hours (may be upper-level undergraduate); 3 elective hours; and ARST 7399 Thesis. A foreign language is not required.

Students work with a faculty advisor in the major studio field to design a course of study. Courses are divided into Level I and Level II. The Advancement to Candidacy Critique must be passed before enrolling for ARST 7399 Thesis.

The Advancement to Candidacy Critique, which is open to all faculty, is scheduled when all Level I courses have been completed with a cumulative 3.0 GPA. The student’s portfolio and all work in the program are reviewed by a faculty committee of at least three persons selected by the student in consultation with the major field advisor and program coordinator. The committee may recommend that the student continue to Level II, repeat some or all of Level I, or be dismissed from the program.

The thesis topic must be approved by the candidate’s advisory committee. Thesis includes a written component, an exhibition, and oral defense. Each of these components must follow departmental guidelines and Graduate School thesis standards.
Level I
- 9 hours of major studio field I, II, III (or major field I, II; minor field I)
- 6 hours of art history
- 3 hours of liberal arts

Level II
- 9 hours of major studio field IV, V, VI (or major field III, IV; minor field II)
- 3 hours of art history
- 3 hours of elective
- ARST 7399 Thesis

Art Education (ARED)
The art education concentration requires at least 36 graduate credit hours, including 9 hours of art education; 9 hours of studio art (may be in one or more disciplines); 9 hours of art history; 6 hours of electives (to be approved by advisor); and 3 hours of thesis with oral defense. A foreign language is not required.

The Advancement to Candidacy Exam must be taken when the student has successfully completed between 21 and 27 program hours. All student work in the program is reviewed by a faculty committee of at least three persons selected by the student in consultation with the major advisor and program coordinator.

The topic for the thesis project must be selected before completing 21 hours and must be approved by the thesis advisor and program coordinator before it is submitted to the Graduate School dean. The thesis project must demonstrate the candidate’s capacity for high-level independent inquiry and research. In addition, it must conform to the deadlines, requirements, and standards for the Department of Art and the Graduate School. Thesis regulations are available from the program coordinator.

Sample Program
- 9 hours from the following: ARED 5194, 5294; 5394, 5325, 7331, 7332, 7333, 7334
- 9 hours in art history
- 9 hours in art studio
- 6 hours electives
- ARED 7399 Thesis Project
Graduation Requirements

- Cumulative GPA of at least 3.0 in an approved program of study as outlined above
- Pass the Advancement to Candidacy Exam or Critique
- Successful completion and oral defense of thesis (and mounted exhibition for studio art)

Courses in Art Education

ARED 5194, 5294, 5394 Independent Study in Art Education
Prerequisite: approval of art education advisor, consent of instructor. Research on a subject selected in consultation with the instructor. Variable credit of one to three hours. Offered in fall, spring, and summer.

ARED 5325 Foundations of Art Education
History of art education; emphasis on changing philosophies, theories of learning, subsequent goals and objectives made apparent in curriculum development. Offered in spring.

ARED 7331 Studio Experiences in Art Education
Studio-based art experiences for students of all ages, ability levels; emphasis on individual student’s studio strengths; augmented by curriculum in drawing, painting, printmaking, three-dimensional materials. Offered in spring and summer.

ARED 7332 Curriculum Instruction in Art Education
Past, present curriculum, instruction; includes historical component as foundation for understanding current teaching strategies; various teaching approaches are analyzed and formalized into applicable classroom art experiences. Offered in fall and spring.

ARED 7333 Selected Topics in Art Education
Prerequisite: graduate standing, consent of instructor. Topics may include past, present approaches to curriculum development; special populations; aesthetics; art history, criticism; art and technology; art and society; critical analysis; philosophic reflections on art, art education; others. May be repeated for credit when topic changes. Offered in fall, spring and summer.

ARED 7334 Research Trends in Art Education
Past and present art education research; emphasis on understanding the nature of educational research in art, various research methods, how research translates into practical classroom application; includes review, critique, application, development of research topics. Offered in fall.

ARED 7399 Thesis Project
Prerequisite: 27 graduate hours. Prepare and complete final thesis project. Offered in fall and spring.
Courses in Art History

**ARHA 5110, 5210, 5310 Special Topics in Art History**
Individual artists, particular periods, geographic areas, media, especially those not covered by normal course offerings. Content, subtitle, and organization change each time offered. Offered on demand.

**ARHA 5300 Studies in the History of Art**
Required for art history concentration. Art historical methodology; directed readings, research on topics, selected in consultation with the instructor, to be presented in class. Offered in fall on even years.

**ARHA 5302 Art Museum Studies**
Policy development, museum administration, staff management, operations funding, budgeting, collection organization, program design. Offered in spring on odd years.

**ARHA 5305 Italian Renaissance Art**
Painting, architecture, sculpture in Italy from c. 1300 to c. 1600; emphasis on major Florentine, Roman, Venetian artists.

**ARHA 5306 Renaissance Art in Northern Europe**
Painting, sculpture, architecture, graphic art in Northern Europe (especially Low Countries, France, England) from end of Gothic period through Reformation.

**ARHA 5307 18th- and 19th-Century European Art**
Painting, architecture, sculpture in 18th-19th-century Europe. Offered in fall on odd years.

**ARHA 5308 20th-Century Painting, Sculpture, and Graphic Arts Since 1945**
Major artists, movements; emphasis on 1945 to present; importance of new materials, techniques; critic’s role. Offered in fall on even years.

**ARHA 5309 A History of Arkansas Architecture**
Development of architecture in Arkansas from origins through contemporary period.

**ARHA 5315 Modern Architecture**
Major developments in European and American architecture from 1900 to present; focus on European from 1900 to 1930, United States from 1930 to 1970; includes technological innovations, current design issues (e.g., preservation, adaptive reuse of historic buildings).

**ARHA 5384 Baroque Art**
Painting, sculpture, architecture in Northern Europe (Netherlands, France, Spain, Italy) from 1600-1725. Offered in spring on odd years.
ARHA 5387 Late 19th-and Early 20th-Century Art
Painting, sculpture, graphic arts, architecture from Post-Impressionist period until World War II. Offered in spring on even years.

ARHA 7197, 7297, 7397 Special Problems in Art History
Prerequisites: graduate standing, consent of instructor. Content, length varies.

ARHA 7303 Seminar in Modern Architecture
Personalities, theories, styles of specific 18th-, 19th-, and 20th-century architects.

ARHA 7315 Seminar in Italian Renaissance and Baroque Art
Directed reading, research on selected topics in Italian Renaissance, Baroque art.

ARHA 7316 Seminar in Northern European Renaissance and Baroque Art
Directed reading, research on selected topics in Northern European art.

ARHA 7327 Seminar in 19th-Century Art
Directed study, seminar presentations on topics in 19th-century painting, sculpture, architecture.

ARHA 7328 Seminar in 20th-Century Art
Selected problems in 20th-century art.

ARHA 7398 Internship in Museum Studies
Prerequisites: 21 graduate hours, consent of coordinator. Concentrated program of practical experience (paid or volunteer), under professional guidance, with a museum, gallery, or other arts organization; requires a journal of internship activities; final written report. Offered on demand.

ARHA 7399 Thesis
Prerequisite: 24 graduate hours. (Required for art history concentration.) May be repeated once for credit. Offered fall and spring.

Courses in Studio Art

ARST 5115, 5215, 5315 Advanced Problems in Design
Experimental materials, techniques in two- or three-dimensional design; includes correlation of visual design elements with those of various multidimensional work not usually covered in normal course offerings. Content, subtitle, and organization change each time offered. Offered on demand.

ARST 7197, 7297, 7397 Special Problems
Prerequisites: graduate standing; consent of coordinator, instructor. Content, length varies.

**ARST 7311 Graduate Drawing I**
Various drawing media, techniques as resource for expression; philosophical, historical roots of contemporary drawing; students encouraged to pursue drawing that incorporates or is tangential to their major area of study. Offered in fall and spring.

**ARST 7312 Graduate Drawing II**
Prerequisite: Studio Art 7311. Continuation of Studio Art 7311. Offered in fall and spring.

**ARST 7313 Graduate Drawing III**
Prerequisite: Studio Art 7312. Continuation of Studio Art 7312. Offered in fall and spring.

**ARST 7314 Graduate Drawing IV**
Prerequisite: Studio Art 7313. Continuation of Studio Art 7313. Offered in fall and spring.

**ARST 7315 Graduate Drawing V**
Prerequisite: Studio Art 7314. Continuation of Studio Art 7314. Offered in fall and spring.

**ARST 7316 Graduate Drawing VI**
Prerequisite: Studio Art 7315. Continuation of Studio Art 7315. Offered in fall and spring.

**ARST 7321 Graduate Painting I**
Contemporary painting concepts, techniques; emphasis may be on oil, acrylic, watercolor, or mixed media. Offered in fall, spring, and summer.

**ARST 7322 Graduate Painting II**
Prerequisite: Studio Art 7321. Continuation of Studio Art 7321. Offered in fall, spring, and summer.

**ARST 7323 Graduate Painting III**
Prerequisite: Studio Art 7322. Continuation of Studio Art 7322. Offered in fall, spring, and summer.

**ARST 7324 Graduate Painting IV**
Prerequisite: Studio Art 7323. Continuation of Studio Art 7323. Offered in fall, spring, and summer.

**ARST 7325 Graduate Painting V**
Prerequisite: Studio Art 7324. Continuation of Studio Art 7324; emphasis on development of personal direction or style. Offered in fall, spring and summer.

**ARST 7326 Graduate Painting VI**
Prerequisite: Studio Art 7325. Continuation of Studio Art 7325. Offered in fall, spring and
summer.

**ARST 7331 Graduate Printmaking I**
Production of prints using various print processes, including relief, intaglio, planeographic process; research of printmaking techniques’ historical development; museum visits, print workshop participation encouraged. Offered in fall and spring.

**ARST 7332 Graduate Printmaking II**
Prerequisite: Studio Art 7331. Principles, characteristics of printing element as surface for direct drawing; studio workshop productions generated conceptually or with aid of outside references; basic black-and-white prints, multiple color-separation methods for fine art print (all color-separation positives produced by hand methods). Offered in fall and spring.

**ARST 7333 Graduate Printmaking III**
Prerequisite: Studio Art 7332. Principles, chemistry of printmaking techniques; includes drawing materials, printing elements, printing papers, solvents, inks, ink modifiers; preservation, print publishing practices. Offered in fall and spring.

**ARST 7334 Graduate Printmaking IV**
Prerequisite: Studio Art 7333. Technological developments in commercial industry; their application to fine art printing processes; includes technology primarily designed for photocopy, word processing industries, computer-generated designs, color photography and color separation methods. Offered in fall and spring.

**ARST 7335 Graduate Printmaking V**
Prerequisite: Studio Art 7334. Experience working with other artists; includes printer working with non-printmaker artist, printmaker working with non-artist printer; insight into complex community of atelier environment dependent on collaboration. Offered in fall and spring.

**ARST 7336 Graduate Printmaking VI**
Prerequisite: Studio Art 7335. Selected special research topics; may include health hazards in printmaking, development of printmaking as a fine art, acceptance and controversy of chromolithography in the 19th-century, nontraditional metals used in printmaking processes, other areas of interest to students; student research presented in text with supporting visuals. Offered in fall and spring.

**ARST 7341 Graduate Graphic Design I**
All aspects of graphic design for the print medium; emphasis on creating professional graphic design works within restricted time periods. Offered in fall and spring.

**ARST 7342 Graduate Graphic Design II**
Continuation of Studio Art 7341; more complex projects with strict deadlines.

**ARST 7349 Practicum in Art Direction**
Student works as an assistant director at UALR Graphic Design (campus studio that does work for Arkansas nonprofit organizations); duties include work with undergraduate designers on their roughs, comprehensives, mechanicals; working with studio’s clients. Offered in fall and spring.

**ARST 7351 Graduate Ceramics I**
For advanced graduate students in ceramics. Individual research in consultation with instructor; emphasis on personal expression in form, content of work. Offered in fall and spring.

**ARST 7352 Graduate Ceramics II**
Prerequisite: Studio Art 7351. Continuation of Studio Art 7351. Offered in fall and spring.

**ARST 7353 Graduate Ceramics III**
Prerequisite: Studio Art 7352. Continuation of Studio Art 7352. Offered in fall and spring.

**ARST 7354 Graduate Ceramics IV**
Prerequisite: Studio Art 7353. Continuation of Studio Art 7353. Offered in fall and spring.

**ARST 7355 Graduate Ceramics V**
Prerequisite: Studio Art 7354. Continuation of Studio Art 7354. Offered in fall and spring.

**ARST 7356 Graduate Ceramics VI**
Prerequisite: Studio Art 7355. Continuation of Studio Art 7355. Offered in fall and spring.

**ARST 7361 Graduate Sculpture I**
Serial development of student-generated concept; required number of substantive pieces completed under faculty supervision, advisement. Offered in fall and spring.

**ARST 7362 Graduate Sculpture II**
Prerequisite: Studio Art 7361. Continuation of Studio Art 7361. Offered in fall and spring.

**ARST 7363 Graduate Sculpture III**
Prerequisite: Studio Art 7362. Continuation of Studio Art 7362. Offered in fall and spring.

**ARST 7364 Graduate Sculpture IV**
Prerequisite: Studio Art 7363. Continuation of Studio Art 7363. Offered in fall and spring.

**ARST 7365 Graduate Sculpture V**
Prerequisite: Studio Art 7364. Continuation of Studio Art 7364. Offered in fall and spring.

**ARST 7366 Graduate Sculpture VI**
Prerequisite: Studio Art 7365. Development of professional portfolio; includes curriculum vitae, 8”x 10” photographs or color Xerox reproductions, slide plates, exhibitions, pertinent publicity; requires oral presentation of work. Offered in fall and spring.
ARST 7371 Graduate Photography I
First of six consecutive photography courses. Student writes proposal for a body of creative work to be completed in the course series. Up to six hours may be taken concurrently. Offered in fall and spring.

ARST 7372 Graduate Photography II
Prerequisite or corequisite: Studio Art 7371. Continuation of Studio Art 7371. Offered in fall and spring.

ARST 7373 Graduate Photography III
Prerequisite or corequisite: Studio Art 7372. Continuation of Studio Art 7372. Offered in fall and spring.

ARST 7374 Graduate Photography IV
Prerequisite or corequisite: Studio Art 7373. Continuation of Studio Art 7373. Offered in fall and spring.

ARST 7375 Graduate Photography V
Prerequisite or corequisite: Studio Art 7374. Continuation of Studio Art 7374. Offered in fall and spring.

ARST 7376 Graduate Photography VI
Prerequisite or corequisite: Studio Art 7375. Continuation of Studio Art 7375. Offered in fall and spring.

ARST 7391 Graduate Illustration I
All aspects of illustration for print medium; emphasis on creation of professional illustration works within strict deadlines. Offered in fall and spring.

ARST 7392 Graduate Illustration II
Continuation of Studio Art 7391; more complex projects. Offered in fall and spring.

ARST 7395 Graphic Design/Illustration Portfolio
Student prepares, for faculty review, a portfolio of work of a quality to compete in today’s graphic design/illustration job market. Offered in fall and spring.

ARST 7399 Thesis
Students will undertake a scholarly investigation of their art studio production as related to art historical, social, and cultural influences. This investigation will culminate in an exhibition, a written thesis and oral defense. May be taken only once for a grade. Offered in fall and spring.
Stabler Hall, Room 601, (501) 569-3235

Master of Arts in Public History

The Master of Arts in Public History provides training in the research methods and practical skills needed for work in archives, museums, historic preservation, and other areas of public history. The program recently added preparation in digital skills to each part of the curriculum. The MA degree has three components: a core segment with internship and thesis, a traditional history segment, and an applied segment. Professionals in the field teach the applied courses. In each segment students combine theoretical knowledge and historical analysis with practical projects.

The program’s [website](#) provides more detailed information.

Admission Requirements

- Baccalaureate degree from an accredited institution with a cumulative grade point average of at least 2.75 (4.0 scale) or 3.0 in the last 60 hours
- At least 15 undergraduate history hours with a grade average of 3.25 or above in all history classes (or complete specific preparatory classes).
- Graduate Record Examination score of at least 152 on the verbal section and a score of at least 142 on the quantitative section.
- Two letters of recommendation, preferably from persons familiar with applicant’s academic work or related work experience.

Conditional Admission

Students admitted conditionally must complete twelve hours with grades of B or greater before changing to regular status.

Transfer Credit

Up to six hours of equivalent courses in history, an approved applied area, or suitable general electives may be transferred from other accredited institutions, with approval of the program coordinator and Graduate School dean. Credit may not be applied to History 7311, 7315, 7391, 7398, 7399, or 7699.

Special students may take program courses with the recommendation of the program coordinator and may later apply the credit to the program if they are admitted.

Program Requirements

The Public History degree requires 36 graduate credit hours, including 18 core hours, nine traditional history hours, nine applied hours, and thesis defense. Core hours include three hours of internship and six hours of a thesis with an oral defense. Up to twelve 5000-level hours may be taken. Courses must have grades of B or greater to count toward the degree.

Students pursuing the Master’s Degree in Public History at UALR have the three following degree plans from which to choose.
Plan I – Students can focus on archives, museums, historic preservation, or digital public history.

Plan II – Students can focus on historical research to prepare for a doctoral program.

Plan III – Students can focus on education, including teaching or museum education.

The applied segment offers emphases in archives, museum studies, and historic preservation and restoration. At least six of the nine applied hours must be in one of these emphases with the remaining three hours selected in consultation with the program coordinator. Students may, with the coordinator’s approval, design an individual plan of study in this segment.

The oral exam covers the thesis. The examining committee, appointed by the Graduate School dean on recommendation of the program coordinator, includes at least the student’s thesis advisor, a history faculty member, and a member of the UALR faculty at large.

Curriculum

Core Segment

<table>
<thead>
<tr>
<th>HIST 7311 Introduction to Public History</th>
<th>HIST 7391 Seminar in Public History</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 7315 Seminar in Historical Methods</td>
<td>HIST 7399 Thesis Seminar</td>
</tr>
<tr>
<td>HIST 7318 Seminar in Public History</td>
<td>HIST 7699 Thesis</td>
</tr>
</tbody>
</table>

History Segment

HIST 5303 The Roman Revolution
HIST 5304 Alexander the Great
HIST 5305 Environmental History
HIST 5312 Medicine, Miracles, and Magic: Early History of Healing in Medieval and Renaissance Europe
HIST 5313 Apocalypse Now and Then: A History of Apocalyptic Thought and Movements
HIST 5315 Religious History of the United States
HIST 5318 Modern Revolutions: From France to China
HIST 5327 Africa in World History
HIST 5328 South Africa in World History
HIST 5329 Empires and Cultures in Work History, 1850-1914
HIST 5330 Witchcraft and Gender in the Atlantic World
HIST 5340 Slavery in North America
HIST 5345 Chinese Film and History
HIST 5350 The United States and the Middle East
HIST 5363 Law in American History
HIST 5373 History of Family and Childhood in Modern Europe
HIST 5375 Modern Mexican History
HIST 5378 The History of U.S.-Latin American Relations
HIST 5396 Seminar in Arkansas History
HIST 7392 Seminar in Early America
HIST 7393 Seminar in 19th-Century America
HIST 7394 Seminar in 20th-Century America
HIST 7395 Special Problems in History
HIST 7396 Seminar in History

Applied Segment - Archives

HIST 7320 Archival Management
HIST 7321 Archival Conservation
Museum Studies
HIST 7330 History Museum Administration
HIST 7331 Historical Interpretation in Museums of History

Historic Preservation
HIST 7341 Historic Preservation and Restoration
HIST 5309 A History of Arkansas Architecture

General
HIST 5306 History with Objects
HIST 7352 Historical Parks Planning and Development
HIST 7355 Community History
HIST 7360 Historical Editing: An Introduction
HIST 7370 Oral History
HIST 7372 Digital History
HIST 7380 Directed Study in Public History

Graduate Assistantships
A limited number of graduate assistantships are available to students enrolled for nine hours. Contact the program coordinator for more information.

Graduation Requirements
- Cumulative GPA of at least 3.0 on an approved program of study as outlined above
- Grades of B or greater on all courses
- Pass the thesis defense

Students who do not achieve a 3.0 GPA in the 36 hours may take up to nine additional hours of approved courses to raise their GPA.

Courses in Public History

HIST 5302 Magic, Science, and the Occult from Antiquity to Newton
A survey of human attempts to explain and control the cosmos from antiquity to the emergence of modern science around 1700, including the contributions of pseudo scientific, occult, and magical world views; internal developments in the history of science; and the relationship between scientific thought and the historical context. Three credit hours.

HIST 5303 The Roman Revolution
This seminar will examine the fall of the Roman Republic and the rise of the Roman Empire. Students in this seminar are expected to acquire a reasonable mastery of major events and developments of this transitional period and to demonstrate at least adequate skill in written analysis of this material.

HIST 5304 Alexander the Great
This undergraduate/graduate seminar will examine the career of one of the most interesting and important figures in world history. Alexander expanded the domain of Greek civilization from the Mediterranean and Aegean Seas to the lands of Afghanistan and India. Three credit hours.

HIST 5305 Environmental History
Humanity's interrelationship with the natural environment through historic times; emphasis on historical factors relating to current environmental problems.

**HIST 5306 History with Objects I**
The role of objects in U.S. History including how different academic disciplines study artifacts; how to identify, authenticate, and evaluate artifacts (using decorative arts to learn visual literacy); and the impact of objects (especially their manufacturing and marketing) on American life.

**HIST 5312 Medicine, Miracles, and Magic: Early History of Healing in Medieval and Renaissance Europe**
A holistic examination of various ways in which Europeans sought to cure disease in pre-modern time. Magic, folk cures, and miracles, as well as the work of physicians, apothecaries, and barber surgeons. The emergence of medicine as a profession and a science. How university-trained physicians came to dominate the healing professions. Three credit hours.

**HIST 5313 Apocalypse Now and Then: A History of Apocalyptic Thought and Movements**
This course offers a history of beliefs about the end of the world in the western Judeo-Christian tradition. Through lectures and readings, we will examine such topics as the birth of apocalyptic thought, the medieval development of various aspects of traditions about the End (such as the figure of Antichrist and millenarian traditions), millennial influences on the discovery and colonization of the New World, millennial influences on the discovery and colonization of the New World, millennial movements of the last two centuries (such as the Millerites and the Mormons), and contemporary apocalyptic scenarios. A major theme of the course will be flexibility of apocalyptic language, its ability to interpret various historical situations, and its power to move people to acceptance or action. Three credit hours.

**HIST 5314 A History of the Future: Millennial Visions in Film and Literature**
Examines past moments in which people take stock of the present by gazing into the future. Through literature and film, studies predictions of the future in their historical contexts. Looks at positive and negative views of the future, secular and religious predictions for humans' fate. Three credit hours

**HIST 5315 Religious History of the United States**
Development of Protestantism including evangelicalism, new denominations, and fundamentalism; incorporation of Catholicism and Judaism into mainstream; relationship between religion and social and political issues including church and state; minority religious beliefs and organizations; varying role of men and women in religious organizations. Three credit hours.

**HIST 5318 Modern Revolutions: From France to China**
A comparative examination of five modern revolutions: the French Revolution (1789-1815), The Meiji "Restoration" in Japan (1853- 1890), the Mexican Revolution (1910-1920), the Russian Revolution (1917-1932), and the Chinese Revolution (1919-1949). We will consider such issues as the extent of real turnover in the state apparatus, the prevalence of state-driven "revolutions from above" as opposed to classic "revolutions from below" in modern history, the balance of internal and external causation, and the nature of revolutionary violence. Three credit hours.

**HIST 5327 Africa in World History**
In this class we will examine Africa's development from ancient times to the present. In particular we will explore Africa's relationships with other areas of the world and discuss the points where the African experience converges and diverges from the experience of other regions. We will also focus on three forces driving Africa's development: geographical contexts, economic systems, and cultural relationships.

**HIST 5328 South Africa in World History**
In this class we will examine South Africa's development form the seventeenth century to the present. In particular we will explore how the geography of southern Africa shaped the emergence of a group of distinct cultures, and how the expansion of racial divisions influenced South African society. We will also focus on the forces of tradition and modernity in the new South Africa.
HIST 5329 Empires and Cultures in World History, 1850-1914
In this class we will explore the intersection of empires and cultures in world history between the mid-nineteenth century and the start of the First World War. We will read texts that describe the cultural encounter between imperial regimes and colonial cultures. These readings by both indigenous and European authors will let us ask questions and find answers to the issues surrounding the clash between empires and cultures in the late nineteenth century.

HIST 5330 Witchcraft and Gender in the Atlantic World
This course explores witchcraft accusations in the early modern era. We will look at witchcraft in Europe, colonial Latin America, and colonial North America through primary and secondary readings. We will see the way that gender, sex, and sexuality influenced the thinking about the “crime” of witchcraft—one of the few crimes during the modern period for which more women were accused than men. The course will culminate with the independent research projects on Salem, Massachusetts. Students with credit for 4330 may not take 5330 for additional credit.

HIST 5340 Slavery in North America
This class investigates the history of slavery and forced labor in America before 1860. This course looks at slavery in the Colonial period, the Revolutionary era, and the 1800s throughout the North American continent. Topics include Native American slavery, the transatlantic slave trade, the development of African cultures in America, and the anti-slavery movement. We will try to understand the diversity of slavery and slave cultures in North America’s different regions as we assess the central role slavery played in the creation of American society. Students with credit for 4340 may not take 5340 for additional credit.

HIST 5345 Chinese Film and History
This course looks at the traumatic twentieth century through the lenses of Chinese filmmakers, particularly focusing on how a century of revolution affected urban and rural areas, the roles of women, and the daily lives of people in general. Three credit hours.

HIST 5350 The United States and the Middle East
The development of American foreign policy in the Middle East from the Treaty of Versailles to the emergence of Al-Qaeda.

HIST 5363 Law in American History
The development of legal institutions in America from their English origins to the present. The rule of law, legal thought and the legal profession, the independent judiciary, civil rights, and the law’s role in economic development. Three credit hours.

HIST 5373 History of Family and Childhood in Modern Europe
The course introduces students to the history of childhood and family life in the nineteenth and twentieth Century Europe.

HIST 5375 Modern Mexican History
A study of the emergence of the modern Mexican state. Historical dimensions of contemporary Mexico are explored through a focus on the 1910 Mexican Revolution and its aftermath. Political party formation, agrarian reform, and labor organizations are investigated along with the role of cultural institutions in institutionalizing change. Graduate students with credit for 4375 may be allowed to take 5375 with consent of the instructor.

HIST 5378 The History of U.S.-Latin American Relations
Survey of U.S.-Latin American relations from the pre-Columbian period to the present with emphasis on the nineteenth and early twentieth centuries. Focus on the diplomatic and economic relationships, including dollar diplomacy, intervention, dictatorship, and revolution. Three credit hours.

HIST 5391 Seminar in United States History.
Prerequisites: History 2311, 2312, three hours of upper-level United States history. Advanced study of a topic in United States history chosen by instructor; includes a major research and writing project incorporating the department’s goals of identifying a problem; establishing a
thesis; gathering, evaluating, and analyzing evidence; and writing in an appropriate scholarly format. Six credit hours.

**HIST 4390/5390 Special Topics in History**  
Prerequisites: specialized study of selected topics in history. Course content changes each semester; refer to the semester class directory. Students with credit for HIST 4390 may enroll in HIST 5390 with approval of the instructor. Three credit hours.

**HIST 4393/5393 Seminar in World History**  
Prerequisites: History 1311, 1312, three hours of upper level non-U.S. history. Advanced study of a topic in non-U.S. history chosen by instructor; includes a major research and writing project incorporating the department’s goals of identifying a problem; establishing a thesis; gathering, evaluating, and analyzing evidence; and writing in an appropriate scholarly format. Three credit hours.

**HIST 5396 Seminar in Arkansas History**  
Discussion, directed readings, research, writing on selected issues. Topics vary each semester; may be repeated once with new topic.

**HIST 5397 Teaching Applications**  
This course links social studies content with practical applications for classroom instruction and curriculum design. Students study history, geography, political science, anthropology, economics, and psychology contained in the state social studies framework for grades 7 – 12, and learn how to plan and detach social studies lessons, units, and curriculum maps. HIST 5397 is not open for students with credit for HIST 4397.

**HIST 7311 Introduction to Public History**  
History, philosophy, purposes of historical agencies; archives; museum organization, operation; cultural resource management; relationship of historians and business community; historians as consultants; professional ethics.

**HIST 7315 Seminar in Historical Methods**  
Basic skills, techniques for historical research; models for use, interpretation of evidence; problem of historical causation; bibliography, techniques for defining, focusing research projects; steps in research planning, design, presentation.

**HIST 7320 Archival Management**  
Techniques of managing contemporary archives; includes methods of document preservation, organization of manuscripts and archival records, administrative systems, philosophy of archival control; experience with actual collections.

**HIST 7321 Archival Conservation**  
Restoration of historical books, documents; includes conservation fundamentals, paper repair methods, book restoration, basic bookbinding techniques; experience with actual collections.

**HIST 7330 History Museum Administration**  
Theoretical, practical aspects; includes purpose of museums, their intellectual and ethical responsibilities, organizational problems inherent in pursuit of these aims.

**HIST 7331 History Museum Interpretation**  
History, functions of historical museums; focus on role as research and educational institutions; includes possibilities, problems of interpreting history for the general public; joint research on a specific problem with local museum staff.

**HIST 7341 Historic Preservation and Restoration**  
Definition, rationale, methods, techniques of preservation; problems of restoration, preservation of historic spaces, buildings; national, state preservation law, agencies; case studies; site surveys; field trips to preservation projects.
HIST 7352 Historical Parks Planning and Development
Discussions, directed readings, research, writing on issues related to planning, development of historic parks; includes identifying and protecting historical resources, land use, staffing requirements, long- and short-term planning, governmental policy, funding, other topics.

HIST 7355 Community History
This course introduces students to the research practices, challenges, and community engagement opportunities associated with local history. Major themes include research in archival and online collections; working with community entities such as schools, non-profit agencies, local government, libraries, museums, and historical societies; and avenues for disseminating research to community audiences. The class is designed to incorporate technology through content delivery, examination of primary source documents, and in student work and presentations.

HIST 7360 Historical Editing: An Introduction
History of historical journal, documents editing, publishing historical materials.

HIST 7370 Oral History
Innovative approach to teaching and learning of history; emphasis on creation, processing, curating, use of oral history materials.

HIST 7372 Digital History
In this class, we will explore the emerging field of digital history by both reading scholarly works and building a website. Our readings will examine digital production, information architecture, oral histories, and audio documentaries. Our website will include a digital file of an interview, scanned historical sources, and an exhibit. At the end of the class, students will know the theoretical background of digital history and will know how to plan, collect, and digitally publish a public history website.

HIST 7380 Directed Study in Public History
Prerequisites: consent of coordinator and, if applicable, supervisory agency. Student chooses to do either a practicum with a local agency or assigned readings and research on issues involving public history. Topics vary each semester.

HIST 7391 Seminar in Public History
Prerequisites: History 5303, 7311, 7315. (Open only to students in the program.) Directed readings, research on specialized topics in public history; concentrates on skills basic to all public history specialization areas, team-research experience.

HIST 7392 Seminar in Early America
Discussion, directed readings, research, writing on selected issues. Topics vary each semester; may be repeated once with new topic.

HIST 7393 Seminar in 19th-Century America
Discussions, directed readings, research, writing on selected issues. Topics vary each semester; may be repeated once with new topic.

HIST 7394 Seminar in 20th-Century America
Discussions, directed readings, research, writing on selected issues. Topics vary each semester; may be repeated once with new topic.

HIST 7395 Special Problems in History
Major individual research project or directed readings in consultation with and under supervision of a faculty member. Topics vary each semester; may be repeated once with new topic.

HIST 7396 Seminar in History
Discussion, directed readings, research, writing on selected issues in American, non-American history. Topics vary each semester; may be repeated once with new topic.

HIST 7398 Internship
Prerequisites: 24 program hours; consent of coordinator. Employment, practical experience in community agency, under professional guidance, in concentration area; requires written report.

**HIST 7399 Thesis Seminar**
In this class you will plan, design, research and write your thesis for the MA program in Public History. We will use Turabian’s “Manual for Writers” and the History Department’s "MA Thesis Guidelines" as a map to work through the different stages of a master’s thesis. Students should repeat this class in two consecutive semesters.

**HIST 7699 Thesis**
Prerequisite: consent of coordinator. Scholarly investigation involving original research.

**Courses in Geography**

**GEOG 5300 Special Topics**
Prerequisites: nine geography hours (or nine hours in an associated discipline that complements the topic), consent of instructor. Topics of contemporary interest and demand; focused to permit in-depth understanding of issue.

**GEOG 5321 Geomorphology**
Prerequisite: consent of the instructor. See ERSC 5321.

**GEOG 5332 Population Geography**
Global, national, and sub-national population process, issues, and policies. Emphasis on basic demographic components of fertility, mortality, and migration; on population structures; factors that influence the demographic components and the population structures over time.
Interdisciplinary Studies

Stabler Hall, Room 501P, (501) 569-3161

Master of Arts in Interdisciplinary Studies

The Master of Arts in Interdisciplinary Studies (MAIS) is an interdisciplinary approach to university studies. The program combines the development of critical thinking, writing, and research abilities with the study of specialized knowledge in two complementary disciplines. Students pursuing the MAIS degree choose program emphases and design unique curricula in consultation with the MAIS graduate program coordinator.

The MAIS degree is designed for persons who wish to continue their liberal education at the graduate level or add breadth to a more specialized undergraduate degree. The communication skills, critical thinking skills, and interdisciplinary methodology gained in the program are not only valuable in themselves but attractive to a wide range of employers as well. For more information, visit the program’s website.

Admission Requirements

- Baccalaureate degree from an accredited institution with a 3.0 GPA (4.0 scale) for all undergraduate work. Candidates with a lower GPA may be considered for conditional admission.
- Written statement of 500 to 1,000 words describing the applicant’s academic and/or professional background and preparation as well as specific interests for disciplines of study and interdisciplinary goals within the MAIS program.
- Two recommendation letters addressing the candidate’s background and potential for success in graduate study (letters may come from various sources; academic reference are preferred. If candidate has no academic references, contact graduate coordinator to discuss other options). In addition to the letters, applicants will provide contact information for three references (names, addresses, phone numbers, email if applicable, and relationship to applicant). Two of these should be the reference letter writers. The reference contacts should also be academic or professional.
- Submission of a writing sample, to follow either A or B below:
A: Applicant will submit an academic paper that was written in the last 5 years, between 5 and 10 double-spaced pages in length (if the paper is longer than 10 pages, applicant may send an excerpted version with brief explanation of overall project);

B: Applicants who do not have an academic paper written in the last 5 years will submit an essay of 1500-1800 words, responding to either question 1 or 2 below (applicant’s choice):

1. If you could have written one scholarly work or produced one artistic work that is well known in your primary discipline of interest, what would it be? Describe the work and explain why.

2. Which course in your academic career to date has been the most important for your intellectual or artistic/creative development? Explain why.

- Possible interview with the program coordinator or admissions committee.

Transfer Work

No more than six credit hours of appropriate graduate course work taken at another institution may be transferred into the program. The MAIS graduate coordinator will determine whether or not graduate courses taken at UALR prior to admission to the program will count toward the 36 hours required.

Program Requirements

The MAIS degree requires 36 credit hours of graduate course work, 40%, (15 hours) of which can be at the 5000 level. The requirements are as follows:

Core Courses

IDST 7310 Introduction to Interdisciplinary Studies: Three hours
IDST 7390 Interdisciplinary Studies Colloquium: Three hours
Courses in one ALS or SSC discipline: 15 hours
Courses in one or two other disciplines: Nine hours
IDST 8310 and IDST 8320 Thesis/Final Project: Six consecutive hours

Courses for the primary area in MAIS come from a discipline within the College of Arts, Letters, and Sciences (ALS) or the College of Social Sciences and Communication (SSC), and will include research methodology and practice in the discipline. Please see the MAIS program website for details about which disciplines are available. Note that individual departments enforce prerequisite requirements for course work and may have other restrictions.

Students are encouraged to check with the department(s) in which they are interested for details on graduate-level course offerings. The nine hours of the secondary area are to be chosen from graduate course offerings in one (or two) other complementary disciplines. Any of the ALS and SSC departments listed above can provide the secondary nine-hour segment. These nine hours may, with permission of the program coordinator, be outside ALS and SCC.

Program Options

The MAIS degree allows the student to design a curriculum that includes a variety of graduate level courses. The combination of a primary discipline with one or two adjunct areas allows for greater breadth and the ability to focus on a particular problem or a subject that does not fit within traditional academic disciplines. Interested students should contact the MAIS coordinator to discuss the many options within the program.

Graduate Assistantships
A limited number of graduate assistantships are available. Refer to the Graduate School website for general information about Graduate Assistantships and the MAIS website for further details.

Graduation Requirements
The MAIS degree requires successful completion of an approved program of study (as outlined in “Program Requirements”) and a final project or thesis, including a formal oral defense.

Courses in Interdisciplinary Studies

**IDST 7310 Introduction to Interdisciplinary Studies**
This course will help students refine their abilities to read and think critically, to understand and make effective arguments, to study and practice research techniques, and to communicate effectively in writing. Students will study interdisciplinary processes and formulate an interdisciplinary research project. A sampling of texts from various disciplines will be considered from an interdisciplinary perspective. The course is only offered in the fall.

**IDST 7390 Interdisciplinary Studies Colloquium**
Prerequisite: IDST 7310. The colloquium has a general course topic and focuses on interdisciplinary reading, writing, and research. The course helps students to sharpen their abilities to communicate effectively across disciplines by sharing data, research methods, and writing techniques. Students will participate in active dialogue in the classroom by presenting and interdisciplinary research project on the selected class topic. MAIS students should enroll after completing IDST 7310 and 9 hours of graduate credit. Students outside the program may enroll only with consent of instructor. This course will be offered each spring.

**IDST 7396 Special Topics in Interdisciplinary Studies**
Discussion, directed readings, research, writing on selected issues in interdisciplinary studies. Topics vary each semester. May be repeated once with new topic.

**IDST 8310, 8320 Interdisciplinary Studies Thesis/Final Project**
Students will complete six hours of consecutive thesis/final project coursework as agreed upon by the student, the program coordinator, and the student’s thesis/final project committee.
Second Languages

Stabler Hall, Room 301, (501) 569-3272

Master of Arts

The Master of Arts in Second Languages (MASL) is a 33 semester hour program designed to provide academic preparation for individuals interested in English as a second language (ESL) and foreign languages in various settings across the state, the nation, and in international venues. This program offers students the opportunity to acquire advanced language foundations in order to work with limited English proficient (LEP) speakers, and French, German, Spanish, and less commonly taught language students from pre-K to 16+ grade levels.

The MASL degree also provides well-qualified professionals to meet the need for second language professionals in the public schools. The degree, however, does not provide teacher licensure. The Arkansas Department of Higher Education has listed foreign languages as one of the critical shortage areas in the past several years. Additionally, foreign language graduates may pursue employment in two-year colleges across the country.

Please visit the program’s website for more information.

Admission Requirements

- Bachelor’s degree from an accredited institution with a cumulative grade point average of at least 2.75 (4.0 scale) or a 3.0 on the last 60 hours
- Two letters of recommendation, preferably from those familiar with the applicant’s academic experience or relevant work experience. These letters should be sent directly to the program coordinator.
- A writing sample from previous course work or professional writing samples approved by the program coordinator. The writing sample(s) should be sent directly to the program coordinator.
- A professional statement (300-500 words) in which you state your reasons, goals, and preparation with regard to our graduate program.

The professional statement should be sent directly to the program coordinator.

Transfer Credit

Up to 12 graduate credit hours may be accepted in transfer with approval of the department chair.

Program Requirements

The master’s program in Second Languages requires the 33 credit hours detailed below. Students will develop either a thesis or an electronic professional portfolio as their capstone experiences.

Required Courses

Core Courses

LANG 5322 Methods of Teaching Second Languages
LANG 5323 Second Language Acquisition
LANG 5324 Teaching People of Other Cultures
LANG 5325 Second Language Assessment
LANG 7311 Teaching Listening and Speaking
LANG 7312 Teaching Reading and Writing
LANG 7314 Second Language Practicum
LANG 7350 Research in Second Languages
7000-level Three-credit hour elective from other discipline/department
Six credit hours of summative experience (choose one of the two options below)
- *LANG 7000 Workshop
- *LANG 7360 Professional Portfolio Capstone

OR
- LANG 7699 Thesis
+ Comprehensive exam (both thesis and non-thesis options)
+ Thesis defense (if thesis option is chosen)
*non-thesis substitutions

Graduation Requirements
- Successful completion of thesis or portfolio. If thesis option is chosen, an oral defense is required.
- Comprehensive examination
- Cumulative GPA of no less than 3.0 on the approved course of study

Courses in Second Languages

LANG 5322 Teaching Second Languages
Prerequisite: baccalaureate degree. Methods and materials used to teach skill development in modern second languages; techniques considered most effective and appropriate assessment strategies. Required for foreign language teacher licensure and the ESL endorsement in the state of Arkansas.

LANG 5323 Second Language Acquisition
Prerequisite: baccalaureate degree. How second language is acquired by children and adults. A course for those preparing to teach students with limited English proficiency. Required for ESL endorsement in the state of Arkansas.

LANG 5324 Teaching People of Other Cultures
Prerequisite: baccalaureate degree. Cultural issues for teaching students with limited English proficiency. A required course for ESL endorsement in the state of Arkansas.

LANG 5325 Second Language Assessment
Prerequisite: baccalaureate degree. Examines goals, principles, instruments, and techniques of assessment and testing of second language learners, K-12 and adult. A required course for ESL endorsement in the state of Arkansas.

LANG 7100, 7200, 7300 Workshop
Interaction between students and professor on topic relevant to teaching in the discipline.

LANG 7311 Teaching Listening and Speaking
Theory and techniques of teaching the skills of listening and speaking; skill-building strategies appropriate for novice through advanced language learners; assessment mechanisms designed for appropriate performance at each level.

LANG 7312 Teaching Reading and Writing
Theory and techniques of teaching the skills of reading and writing; skill-building strategies appropriate for novice through advanced language
learners; assessment mechanisms designed for appropriate performance at each level.

**LANG 7314 Second Language Practicum**  
Prerequisite: LANG 5322.  
Practical application of the principles of second language teaching in public elementary and secondary schools, Intensive English Language Program, and adult ESL learning environments.

**LANG 7350 Research in Second Language Education**  
Understanding and critiquing research in second language education; includes a student-generated research project on a current topic in second language education.

**LANG 7360 Professional Portfolio Capstone**  
Prerequisite: consent of instructor. Students will produce a curated portfolio of theoretical and applied artifacts, including an executive summary of the students’ graduate studies, a professional teaching philosophy, a curriculum vita, and a narrative presentation of research, pedagogical, and assessment samples in a digital format.

**LANG 7699 Thesis**

Prerequisites: completion of basic core, LANG 5322, 5323, 5324, 5325, 7311, 7312, and 7350, and the consent of the Graduate Program Coordinator.

Students will develop a thesis proposal, thesis description, survey of the relevant literature, time-table for completion, and names of committee members and submit this proposal to the Graduate Program Coordinator for approval.

Courses in International Studies

**INTS 5301 Independent Study in International Studies**  
An advanced exploration of an issue/topic in international studies, resulting in a major research project or a series of smaller research projects. The topic is chosen in consultation with the course instructor, and a second faculty reader is required. Can be repeated for credit.

**INTS 7301 Advanced Independent Study in International Studies**  
An advanced exploration of an issue/topic in international studies, resulting in a major research project or a series of smaller research projects. The topic is chosen in consultation with the course instructor, and a second faculty reader is required. Can be repeated for credit.
Applied Science

Fine Arts, Room 210, (501) 683-7125
The Applied Sciences (ASCI) graduate programs are housed in the College of Arts, Letters, and Sciences (CALS). The programs offer applied research in a broad set of emphasis areas, including applied chemistry, applied biosciences, applied physics, materials, nanotechnology, computational science, applied mathematics, and environmental science.

The Applied Science department offers two degrees, the Doctor of Philosophy and the Master of Science. Each degree has multiple emphases. Faculty housed in other departments in both the CALS and the Donaghey College of Engineering and Information Technology (EIT) participate in the emphasis tracks. For more information and access to the online application process, visit the Applied Science website.

Master of Science in Applied Science

The Master of Science degree is an interdisciplinary program designed to advance a student’s knowledge beyond the baccalaureate degree and to teach the student how to approach a research project. Students may either pursue a generic applied science master’s degree or, with sufficient specialized course work, may earn a master’s degree in applied physics.

The degree is designed for students with a wide variety of research and/or curricular interests in science and engineering. The thesis option includes a proposal defense and a thesis defense, and provides the student with an opportunity to carry out thesis-based research. The non-thesis option includes a comprehensive exam and a project. The student choosing the non-thesis option will have three different alternatives to satisfy the comprehensive exam and project requirement. These alternatives are intended to cater to students who

1. are in the Applied Science (ASCI) Ph.D. program and want to acquire the ASCI M.S. degree since they satisfy a majority of the cognate requirements, or
2. want to complete some of the requirements of the ASCI Ph.D. as a precursor to applying for admission to the Ph.D. program, or
3. want to complete a predominately course based master’s degree. The details of the programs are given below.
Admissions Requirements

- Applicants must possess a baccalaureate degree in an appropriate scientific discipline, such as chemistry, physics, biology, material science, mathematics, statistics, or earth science.
- They must have an overall undergraduate GPA of 3.0.
- On the GRE, applicants must have a minimum quantitative score of 151 and verbal score of at least 138, and a 4.0 on the writing assessment portion (or combined 1,000 in the older GRE scoring system with a minimum score of 650 on the quantitative portion).
- With the approval of the graduate coordinator, applicants with a 3.5 GPA or greater on their last 60 hours of graduate and undergraduate coursework may not be required to take the GRE.
- Applicants must possess the requisites for their intended area of study.
- International Students: International students whose native language is not English and who do not have a degree from a regionally accredited U.S. institution of higher education must also submit a score of at least 79 on the internet-based Test of English as a Foreign Language (TOEFL) exam, or a 550 on the paper-based test, or 213 on the computer-based version. In order to qualify for a teaching assistantship, students whose native language is not English must score a 5.0 on the Test of Spoken English (TSE).

Conditional Admission

In certain cases, students not meeting these requirements may be admitted on a conditional basis. The conditional student must maintain a minimum GPA of 3.0 in at least nine CALS or EIT graduate credits in the first year of study to be fully admitted.

Recommendations on a graduate application for admission to Applied Science’s Master of Science program are made by the Applied Science graduate coordinator with input provided by the relevant Applied Science doctoral faculty. Satisfying minimum requirements for admission by itself does not guarantee admission. Other factors that could be involved include but are not limited to the availability of funding and appropriate faculty mentors.

Program Requirements

Course Work

The master of science degree requires a minimum of 30 credit hours beyond the baccalaureate degree. The student’s plan of study must be developed in conjunction with the thesis advisor/project instructor and the Student Advisory Committee.

If a student receives one C in his/her course work, he/she will be warned that his/her academic performance is unacceptable and that his/her status will be reviewed by the relevant Applied Science doctoral faculty, who will suggest corrective action. A student receiving two Cs or either a D or an F in his/her course work will be dismissed from the program, pending review by the Applied Science faculty.

Emphasis in Applied Physics

To earn an emphasis in applied physics, students must take at least nine credit hours from recognized physics courses recognized by the Applied Science department.

Transfer of Credit

A maximum of six credit hours may be transferred from an accredited graduate program. The graduate coordinator will determine applicability of the transfer.

Student Advisory Committee
The Student Advisory Committee will be composed of four members, including the committee chair, who will be the thesis advisor/project instructor. The chair and two of the three members must be faculty members from CALS. The at-large member can be any other UALR graduate faculty or Applied Science adjunct faculty. The Applied Science faculty must approve the committee constituency.

Thesis Option

The thesis subject is selected by the student and the Student Advisory Committee at least one year prior to the oral defense. The written thesis format must follow the UALR Graduate School’s Dissertation and Thesis Guidelines found on the Graduate School website.

Thesis Proposal

At least one year prior to the thesis defense, the candidate must present a proposal for his/her thesis work to the advisory committee.

Thesis Defense

Students will present and orally defend their completed master’s research before their advisory committees. The defenses will be open to the public and must be announced at least two weeks in advance.

Non-Thesis Option

Comprehensive Exams

After the candidate has completed eighteen credit hours of graded course work, the candidate may attempt the comprehensive exams. The comprehensive exam requirement must be passed in no more than two attempts.

The second attempt has to be in the semester immediately following the semester in which the first attempt was made. The student may opt for either of the two options listed below to satisfy the comprehensive exam requirement, but must get prior written approval from their Student Advisory Committee for their choice. These options are:

- The student may take an oral exam administered by his/her student advisory committee, or
- The student may take the Doctoral Candidacy Exams. If a student chooses this option, he/she must pass the exams in the three candidacy subjects within the same emphasis area. The student may test only in those candidacy subjects, which he/she has taken as part of the eighteen credit hours of graded course work mentioned above. The Doctoral Candidacy Exam rules will be invoked to determine whether the student has passed or failed.

Project Presentation and Report

The student must complete a project, by means of six credits of Independent Study (ASCI 7X89) with the project instructor as the instructor of record. Prior to undertaking the Independent Study courses, the student must present a project plan to the Student Advisory Committee. Upon completion of the Independent Study courses, the student must orally present his/her work to the Student Advisory Committee, and deliver a written project report, in the format specified by the project instructor, to the Student Advisory Committee for approval, for which at least two-thirds of the committee members will have to vote in favor of that outcome for it to be approved.

Successful defense of the doctoral proposal and acceptance of a peer-reviewed written document on some completed portion of a project, such as a conference paper or a journal article, with the student as the primary or corresponding author, may serve in lieu of the project presentation and report, with prior written approval from the Student Advisory Committee.
Credit Requirements

The master of science degree requires a minimum of 30 credit hours beyond the baccalaureate degree.

Course Credits

A minimum of 18 credit hours in 5000 or 7000 level graded courses within CALS or EIT must be taken. A grade of B or greater must be obtained in each course to count towards the minimum course requirement. A maximum of six credit hours of independent study (ASCI 7X89) or special topics (5399, 7399) may be applied to the master of science with the following exceptions. Those students who are required to use six hours of independent study (ASCI 7X89) to complete a project under the non-thesis option may apply three additional credits of independent study (ASCI 7389) or special topics (5399, 7399) to the master of science.

Thesis/Dissertation or Project Credits

Either a minimum of twelve credit hours of master’s thesis (ASCI 8X00) or a minimum of twelve credits of research/dissertation (ASCI 9X00) or a minimum of six credits of Independent Study (ASCI 7X89) are required.

Graduation Requirements

- Successful completion of an approved program of study with a minimum GPA of 3.0
- Successful completion of the writing requirements

Thesis Option

- Successful completion of thesis proposal
- Successful completion of thesis defense
- Submission of an acceptable thesis to Graduate School

Non-Thesis Option

- Successful completion of Comprehensive Exam
- Successful completion of Project Presentation and Report

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<tr>
<td>Minimum Graded Course Credits</td>
<td>18 credits</td>
<td>18 credits-A maximum of six independent study (ASCI 7X89) and/or special topics course (5399, 7399) may be applied towards the M.S. requirement.</td>
<td>18 credits-A maximum of three independent study (ASCI 7X89) or special topics (5399, 7399) in addition to the six credits of independent study (ASCI 7X89) credits required for project (see second row and last row) may be applied towards the M.S. requirement.</td>
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Doctor of Philosophy in Applied Science

Faculty participating in the doctoral program are drawn mainly from the Departments of Biology, Chemistry, Earth Science, Mathematics and Statistics, and Physics and Astronomy.

The Doctor of Philosophy in Applied Science is awarded upon completion of a program of advanced study including a significant original dissertation in applied research or design. Work accomplished without the supervision of an Applied Science doctoral faculty member will not be accepted in lieu of the dissertation requirements. The research must be relevant to the emphasis area in which the student is pursuing a degree.

All emphases have similar program requirements. Each emphasis has its own candidacy exams, seminar requirement, and specific course requirements, which are described under the Program Requirements for the Doctor of Philosophy.

The following emphasis areas are offered:

Applied Biosciences

The applied biosciences emphasis is a research-oriented academic course of study that encompasses the broad fields of biotechnology and applied biological sciences. Research areas include molecular and cellular biology, phylogeny, evolutionary ecology, genomics, and bioinformatics. ASCI 7192 Biosciences and Bioinformatics Seminar is required each semester the student is enrolled.

Applied Chemistry

The Ph.D. emphasis in applied chemistry provides advanced preparation for careers in government, industrial, and academic research. The
curriculum is a blend of traditional and non-traditional, innovative courses that reflect the needs of modern chemistry. The ULR Department of Chemistry has research-quality instrumentation and computer facilities, gives individual attention to each student, and offers high-quality instruction.

Applied Physics

The applied physics doctoral emphasis is designed to prepare students in cutting-edge research areas in Applied Physics, Materials, Earth Sciences, Astronomy, and Astrophysics that include advanced materials, nanotechnology, photovoltaic devices, applied geophysics, seismology, dark matter and galaxies.

Computational Science

The computational science emphasis applies to mathematical modeling, simulation and visualization, and high performance computing to specific scientific disciplines. Admission to the computational science emphasis areas requires knowledge of discrete mathematics, differential and integrated calculus for single and multi-variable functions, linear algebra, differential equations, mathematical statistics, and programming through data structures.

Graduate Assistantships

Graduate assistantships that support teaching and research opportunities are available to qualified full time students. Tuition is paid for nine credits, and a stipend is provided for living expenses. Students must pay registration fees, buy textbooks, and purchase any necessary support materials. For more information about graduate assistantships, the online application process, and other financial assistance opportunities, visit the Applied Science website. A student supported by a graduate assistantship shall be registered as a full-time student.

Admission Requirements

- Applicants must possess a baccalaureate degree in an appropriate scientific discipline such as chemistry, physics, materials science, biology, mathematics, statistics, or earth science.
- They must have a minimum overall GPA of 3.0 in the graduate and undergraduate credit hours.
- On the GRE, applicants must have a minimum quantitative score of 155, verbal score of at least 138, and writing assessment score of at least 4.5 (or combined 1,000 in the older GRE scoring system with a minimum score of 700 on the quantitative portion).
- With the approval of the graduate coordinator, applicants with a 3.5 GPA or greater on their last 60 of graduate and undergraduate credit hours, may not be required to take the GRE.
- Applicants must possess the prerequisites for their intended areas of study.

Recommendations on a doctoral application for admission to the Applied Science program are made with the collective input of the Applied Science Doctoral faculty. Satisfying minimum requirements for admission by itself does not guarantee admission. Factors that could be involved include, but are not limited to, availability of faculty mentors and financial support in cases where such support is sought by an applicant.

International Students

International students whose native language is not English and who do not have a degree from a regionally accredited U.S. institution of higher education must also submit a score of at least 79 on internet based Test of English as a Foreign Language (TOEFL) exam or 550 on the paper based or 213 on the computer-based versions. In order to qualify for a teaching assistantship, students whose native language is not English must score a 5.0 on the Test of Spoken English (TSE).
Conditional Admission

In certain cases, students not meeting these requirements may be admitted on a conditional basis. The conditional student must maintain a minimum GPA of 3.0 in at least nine CALS or EIT graduate credits in the first year of study to be fully admitted.

Program Requirements

Writing Requirement

An English Writing Proficiency Exam (WPE) will be offered each spring term by the Applied Science program. This exam will assess the student’s ability to communicate in a written format. Each student must pass this exam to fulfill graduation requirements. A student who does not pass the WPE is required to take English Writing Proficiency Laboratory (EWPL). The EWPL is offered each spring term. The student must take the EWPL each spring term until he/she passes.

Seminar and Research Ethic Course Requirement

All Ph.D. students are required to register for the Applied Sciences Seminar (ASCI 7190) each semester of residency. Students in the Applied Biosciences emphasis area may choose to register for Applied Bioscience Seminar (ASCI 7192) instead of ASCI 7190.

All Applied Science doctoral students are required to register for and successfully complete the Research Ethics course (ASCI 7118) in any one semester prior to graduating from the program. A student registered for Research Ethics course can be exempt from registering for Applied Science Seminar or Applied Bioscience Seminar for that semester upon the approval the graduate coordinator.

A maximum of one credit hour of seminar (or Research Ethics) hour per semester can be counted towards the credit requirements of the Applied Science PhD.

Laboratory Rotations

All Applied Science doctoral students must register for Introduction to Research in Applied Science (ASCI 7×45), also called “Laboratory Rotation,” in their first semester in the program; they must receive a “satisfactory” grade at the end of the rotation. Rotations can be performed with any Applied Science doctoral faculty member. Students can receive from one to three credit hours for their rotations by registering for ASCI 7145, 7245, or 7345. At the end of the rotation, the student and the rotation host should meet and discuss the progress of the rotation. The student should present the results, either orally or in the form of a written report, to the rotation host.

Students also need to submit a written report to the coordinator of laboratory rotation. If the student has not selected his/her dissertation advisor after the first semester of rotations, the student will be required to register again for ASCI 7×45. Failure to perform adequately in the laboratory rotation may result in termination of state assistantship funding.

A maximum of two credit hours of Laboratory Rotation can be counted towards the credit requirements of Applied Science PhD.

Doctor of Philosophy Graded Program Requirements

All emphases require a minimum of 72 credit hours beyond the baccalaureate degree. Specific requirements depend on the emphasis area chosen and are detailed in those sections. The student’s plan of study must be developed in conjunction with his/her doctoral advisor and advisory committee.

- A minimum of eighteen (18) credit hours of course work is required
Applied Science - 2015-2016 Graduate Catalog

from 5000- and 7000-level courses in CALS and EIT. The Introduction to Research course, ASCI 7145, ASCI 7245, or ASCI 7345, must be taken, and a grade of “credit” must be obtained.

- A minimum of 42 credit hours in the 9000-level doctoral research/dissertation is required. The research must be substantial and must extend the state of the art in the student’s chosen field through theoretical development, design or process improvement, or experimental technique.

If a student receives one C in his/her course work, he/she will be warned that his/her academic performance is unacceptable and that his/her status will be reviewed by the Applied Science Doctoral Affairs Committee (ASDAC), which will suggest corrective action. A student receiving two Cs or either a D or an F in his/her course work will be dismissed from the program, pending review by ASDAC.

Transfer of Credit

A maximum of six credit hours may be transferred from an accredited graduate program. Transferability of credit is determined by the student’s advisory committee based upon the applicability of the course to dissertation work and the student’s educational goals.

Candidacy Exam

The purpose of the candidacy examination is to determine whether the applicant possesses the attributes of a doctoral candidate. The candidacy exam will be held twice a year after the start of fall and spring classes. The candidacy exam is a comprehensive, written test composed of four subject tests, each of which must be passed. The student will be tested on topics selected from the candidacy subject list in his/her emphasis area. The student may attempt the candidacy exam a maximum of two times and must attempt it in consecutive semesters. A student who has not passed all exams after the second offering will be dismissed from the program.

Students must attempt the exam no sooner than the beginning of the second semester in the program. A student must take the exam at the next opportunity after completion of the core in his/her area and, in any event, no later than the beginning of his/her fifth semester in the program. A minimum GPA of 3.0 in graduate course work is required to take the examination.

Candidacy Subjects

<table>
<thead>
<tr>
<th>Applied Biosciences</th>
<th>Applied Physics</th>
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<tbody>
<tr>
<td>Organism Functions</td>
<td>Mechanics</td>
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<tr>
<td>Cellular Function</td>
<td>Electricity and Magnetism</td>
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<tr>
<td>Genetics</td>
<td>Quantum Mechanics</td>
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<tr>
<td>Biochemistry and Molecular Biology</td>
<td>Statistical Thermodynamics</td>
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<tr>
<td>Biological Modeling and Analysis</td>
<td>Elastic Wave Theory</td>
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<td>Ecological Interaction</td>
<td>Potential Theory</td>
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<tr>
<td>Discipline Specific Applications</td>
<td>Material Physics</td>
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<td>Astrophysics</td>
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<td>Discipline Specific Applications</td>
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Doctoral Advisor

A student’s dissertation advisor must be a doctoral faculty member (approved by ASDAC) participating in the Applied Science graduate program. Those students who do not have a doctoral advisor by the end of the third semester may be dismissed. Changing doctoral advisors after this point is possible, and sometimes advisable, but it usually slows a student’s completion of degree requirements. Therefore, this decision should be approached carefully.

Doctoral Advisory Committee

The student’s doctoral advisory committee will be composed of five members, including the student’s doctoral advisor who will serve as the committee chair. Four of the five members including the chair must be Applied Science doctoral faculty members. The at-large member(s) may be any other person who has graduate faculty status at UALR. This also includes full-time research faculty with graduate faculty status. However, postdoctoral researchers can only serve as one of the external members of a dissertation committee. The ASDAC must approve the committee constituency. When a student proposes his/her dissertation committee to ASDAC, he/she also needs to provide a brief written justification explaining the role of each member in contribution to the student’s dissertation research. Students are encouraged to form their advisory committee with a majority of faculty members from his/her respective emphasis area. Dissertation committees cannot be changed after the proposal defense unless the student has a compelling or extraordinary reason (e.g., leaving or retirement of a committee member).

The dissertation subject is selected by the student and the advisory committee at least two years prior to the oral defense of the research. It must be a scholarly contribution to a major field of applied science in the student’s emphasis area. The written dissertation format must follow the UALR Graduate School’s Dissertation and Thesis Guidelines found on the Graduate School website.

Dissertation Proposal

At least two years prior to the dissertation defense, candidate must present a written proposal in either a National Institutes of Health (NIH) or National Science Foundation (NSF) grant proposal format for his/her dissertation work to the advisory committee. The written proposal should be given to the advisory committee at least two weeks in advance of meeting with the committee.

Dissertation Defense

Students will orally defend their dissertation research before their advisory committee. Dissertation should be given to the advisory committee at least two weeks in advance of meeting with the committee. The defense will be open to the public and must be announced at least two weeks in advance.

Graduation Requirements

- Successful completion of minimum credit requirements
- Successful completion of an approved program of study with a
Courses Used in Applied Science Emphases

A list of courses in applied science (ASCI) with descriptions is provided on the following pages. Additional courses offered within the participating departments can be found under the “Master of Science in Biology,” the “Master of Science and Master of Arts in Chemistry,” the “Master of Science in Computer Science,” the “Master of Science in Information Quality,” and the “Non-program Courses” sections of this catalog.

Students admitted to the UALR Graduate School but not the applied science program must have the instructor’s consent to take any applied science (ASCI) course.

Courses in Applied Science

**ASCI 5310 Introduction to Signal Processing**
Prerequisite: MATH 3322 or equivalent. Introduction to the fundamental concepts in signal processing. Use of the fundamental transform techniques (Laplace transform, discrete Fourier transform, z-transform). Discrete time representation of signals, linear time invariant systems. Correlation, coherence, and time delays. Standard system models (ARMA, ARMAX). FIR and IIR filters. Three hours lecture. Three credit hours.

**ASCI 5315 Advanced Dynamics I**

**ASCI 5355 Elastic Wave Theory**

**ASCI 5360 Potential Theory**
Prerequisites: MATH 1451, MATH 1452, MATH 2453, and MATH 3322. Solution to Laplace’s equation using different boundary and initial conditions. One-, two- and three-dimensional equations will be analyzed. Various coordinate systems (rectangular, cylindrical, and spherical) will be used in the solution of the Laplace function, the Associate Legendre function, and orthogonality of the Legendre function.

**ASCI 7118 Research Ethics in Science and Eng.**
The course uses a case-based method to cover various topics related to professional research ethics. It is intended for entering science and engineering graduate students in the Donaghey College of Engineering and Information Technology (DCEIT). The purpose of the course is to familiarize students with professional ethics related to research and to prepare them to deal with typical ethical situations that may occur in the course of their graduate studies and professional careers.

**ASCI 7145, 7245, 7345 Introduction to Research in Applied Science**
First semester orientation course to allow new students in the applied science doctoral program to work in a number of faculty research areas. This course will aid the student in the selection of his/her doctoral research director. Variable credit of one to three hours. Offered on demand.
**ASCI 7189, 7289, 7389 Research in Instrumentation**
Design, research in basic, applied instrumentation; requires laboratory research project involving instrumentation characterization or development. F, S.

**ASCI 7190 Applied Science Seminar**
Prerequisites: graduate standing, consent of thesis advisor and graduate coordinator. Students, faculty, and invited speakers will present, discuss, and exchange ideas on research topics of general interest. Credit must be received at least one semester before enrollment in the last research semester. One hour session per week. Course may not be repeated for credit. Graded: credit/no credit.

**ASCI 7191, 7291, 7391 Cooperative Education in Applied Science**
Prerequisite: full-time attendance for one semester in the applied science program with a GPA of 3.00 or better and the approval of the major professor and the graduate coordinator. Complements the classroom experience by allowing the student to apply the concepts of instrumentation in the work place. Minimum of one 10 week summer term. Written report, minimum of 200 hours work per credit hour are required. The exact number of hours and the nature and responsibilities of the work will be specified in writing by the student, the sponsoring faculty member, and the employer. The course may be repeated for credit. The course cannot be used for credit toward the requirements for an applied science degree.

**ASCI 7192 Biosciences and Bioinformatics Seminar**
Prerequisites: graduate standing, consent of thesis advisor and graduate coordinator. Students, faculty, and invited speakers will present, discuss, and exchange ideas on research topics of general interest in the field of Biotechnology. One hour session per week. Course may be repeated for credit. Graded: credit/no credit. Cross-listed with BINF 7192.

**ASCI 7295 Practical Topics in Science Management**
A survey of practical topics relevant to practicing scientist and engineers such as ethics, project management, and grant writing. While an emphasis is placed on bioinformatics, topics will be of interest to all participating in science and engineering projects. Two credit hours. Cross-listed with BINF 7295.

**ASCI 7307 Smart Materials**
Prerequisite: ASCI 4320 or equivalent. This course will deal with the unique nonlinear, hysteretic response of smart materials that arise due to coupling between mechanical and thermal or electric or magnetic fields. Specifically, microstructural characteristics and constitutive modeling of shape memory alloys, ferroelectric materials and ferromagnetic materials will be covered. Use of these smart materials in sensor and actuator design will be addressed.

**ASCI 7317 Nano-structural Materials: Physical and Chemical Properties**
Prerequisites: SYEN 3372 or PHYS 4340 or CHEM 4340 or equivalent. This course introduces students to the area of nanotechnology and the novel properties of the materials built at the nanoscale. The course will cover the main properties of nano-materials, various methods for synthesis and characterization and the most up-to-date applications from nanoelectronics, advanced materials, bio-medicine, etc. The course is designed for graduate students with a background in chemistry, physics, and engineering.ASCI 7318 Micro- and Nano-Fabrication

**ASCI 7318 Micro- and Nano-Fabrication**
Prerequisites: consent of instructor. This course will introduce some of the important micro- and nano-fabrication techniques that are mostly used in the areas of microelectronics and nanotechnology. Some of the topics that will be covered include diffusion of impurities, thermal oxidation, ion implantation, optical lithography, thin film deposition, etching, nano-lithography, nano-imprinting, growth of nano-rods and nano-springs by glancing angle deposition, and growth of carbon nano-tubes. During the course, students will become familiar with some of the basic experiments
including thin film and glancing angle depositions, etching, and film characterization techniques. The course is intended for graduate students from science and engineering majors.

**ASCI 7340 Applied Instrumental Optics**
Fundamental concepts in design and implementation of optical principles in analytical instrumentation; solving optics engineering problems; includes electromagnetic wave analysis, reflection and refraction, interference and diffraction, optical waveguides, Fourier analysis, coherence and holography. On demand.

**ASCI 7341 Electro-Optics Instrumentation**
Prerequisite: Applied Science 7340 or equivalent. Physical principles and operating characteristics of electro-optical devices and systems; gas, chemical, solid state and semiconductor lasers; Gaussian beam optics, laser modulators and scanners; imaging devices; thermal and photon detectors; fiber and integrated optics; nonlinear optical devices. Offered on demand.

**ASCI 7344 Plant Hormonal Biology**
This class will provide fundamental knowledge about major classes of phytohormones (auxins ABA, ethylene, gibberellins, cytokinins) as well as new plant hormones such as brassinosteroid strigolactones jasmonates. The structure and function of the all classes of plant hormones will be discussed in some detail and the interactions and crosstalks between different phytohormones will be highlighted. Special attention will be given to regulation of biosynthesis of phytohormones for biotechnological applications and agriculture.

**ASCI 7355 Introduction to Geophysics**
Prerequisite: MATH 1451. Application of geology and geophysics to study the interior of the earth and the development of its surface features.

**ASCI 7365 Advanced Seismology**

**ASCI 7375 Biochemistry of Biological Molecules**
Prerequisites: introductory biochemistry course or permission of the instructor. Three five-week modules providing a critical introduction into the structure and biological functions of nucleic acids, proteins and membranes. Topics in the first section, nucleic acids, include structure-function relationships among DNA, RNA, and proteins during replication, transcription and translation. Topics in the second section, proteins, include the principles of protein folding, function, purification and enzyme kinetics. Topics in the third section, membranes, include mobility of membrane constituents, properties of membrane proteins, mechanisms of membrane transport, membrane synthesis and flow, secretion, receptors and signal transduction.

**ASCI 7380 Biomedical Instrumentation**
Principles of biomedical instrumentation; special constraints in safety, signal transduction, signal-to-noise ratio; special problems in medical instrument design; includes Food and Drug Administration regulations, electrical processing, data acquisition; medical instrument design case studies; emphasis on theory, common difficulties, present research directions of bio-instrumentation design; requires laboratory assignments, major laboratory project. Three hours lecture. Three credit hours. Offered on demand.

**ASCI 7381 Physiological Measurement Techniques**
Principles, physiology, physics, instrumentation of modern physiological measurements; includes measurements of electrocardiogram, pulmonary function, metabolic rate, blood flow, human performance; ultrasonic
imaging, stress tests, impedance cardiology; emphasis on theory of each
technique's measurement difficulties, present research directions;
requires proposal of a technique that overcomes some disadvantages of
existing methods. Three hours lecture. Three credit hours. Offered on
demand.

**ASCI 7385 Concepts in Genetic Analysis**
Prerequisites: introductory undergraduate genetics or molecular biology
course. Methods of genetic analysis including mutant isolation, genetic
and physical mapping, receptors genetics, evolutionary mechanisms,
molecular variation, and genomicevolution.

**ASCI 7399 Special Topics in Applied Science**
Detailed study in applied science and related areas; may be lecture or
lecture and laboratory, depending on specific topics. Variable credit of one
to three hours. Offered on demand.

**ASCI 7405 Principles of Analytical Instrumentation**
Modern analytical instrumentation; physical, chemical basis for
measurements; basic signal processing; basic optics; includes specific
instrumentation, methods for ultraviolet-visible and infrared
spectrophotometry, atomic and mass spectroscopy, nuclear magnetic
resonance, x-ray methods, analytical separations.

**ASCI 7451 Introduction to Air Contamination Evaluation**
Generation, propagation, measurement, evaluation of air contaminants
(including aerosols, gases, vapors); principles of sample collection and
analysis, direct measurement, statistical analysis and interpretation of
results; applications include monitoring and modeling of industrial,
community, transportation, indoor environments and sources.

**ASCI 8100 – 8600 Master’s Thesis**
Prerequisites: consent of advisor.

**ASCI 9100 – 9600 Doctoral Research/Dissertation**
Prerequisites: consent of advisor. One to nine credit hours to be
determined at the time of registration.

**ASCI 9700 – 9900 Doctoral Research/Dissertation**
Prerequisites: consent of advisor. One to nine credit hours to be
determined at the time of registration.
Applied Statistics

Graduate Certificate in Applied Statistics

Program Requirements (15 hours)

Core Courses (Nine hours)

STAT 7340 Advanced Statistical Methods I
STAT 7341 Advanced Statistical Methods II
STAT 7342 Introduction to SAS

Elective Courses (Six hours)

Students must take six hours at the 5000-level or above. Courses must be related to statistics or directly support statistics. Elective courses can also be statistic courses from a specific discipline offered by other departments. The director of the program must approve elective courses for credit toward the graduate certificate in Applied Statistics.

Students who finish the graduate certificate in Applied Statistics and chose to get a master of science in Mathematical Sciences with an emphasis in Applied Statistics can transfer the 15 hours toward the master’s degree program.

Courses in Statistics

**STAT 7340 Advanced Statistical Methods I**
Prerequisite: a grade of C or greater in MATH 1451 and STAT 3352 or equivalent. This course is designed to cover the more common advanced statistical concepts and methods. Probability theory, collecting data, sampling, inference, interval estimation, tests of hypotheses for single mean, two means, proportions, and the use of computer packages.

**STAT 7341 Advanced Statistical Methods II**
Prerequisite: a grade of B or greater in STAT 7340. This course is designed to cover the more common and advanced statistical concepts and methods. Simple linear regression, multiple linear regression, ANOVA of single factor experiments, ANOVA of multi-factor experiments, non-parametric methods, categorical data analysis, Bayesian decision theory and methods, and the use of computer packages.

**STAT 7342 Introduction to SAS**
This course is designed to introduce students in all disciplines to conducting data analyses and managing data using the SAS system and SAS programming language. The basics of the SAS language and SAS data sets, reading SAS logs, viewing and printing output, inputting data into SAS, manipulating data and creating new variables using SAS procedures, generating descriptive statistics and frequency distributions using SAS Insight. Performing hypothesis tests and constructing confidence intervals, building categorical models, building and interpreting simple and multiple linear regression models, constructing ANOVA models using SAS procedures and Analyst.

**STAT 7343 Programming in SAS**
Prerequisite: a grade of B or greater in STAT 7342. This course is designed to introduce students in all disciplines to conducting a deep SAS programming on topics in statistical simulation and computation using the SAS system and SAS programming language. Pseudo-random-variate generation, optimization, Monte Carlo simulation, Bootstrap, and Jackknife methods.
Fribourgh Hall, Room 406, (501) 569-3470

Master of Science/ Master of Arts in Biology

The Department of Biology offers a Master’s degree with two possible tracks: the thesis option leading to the M.S. and the non-thesis/course work option leading to the M.A. This program is designed to serve a wide variety of post-baccalaureate educational needs in central Arkansas and serves students with diverse backgrounds and goals. The program provides students with core skills desired by potential and current employers, specific knowledge and techniques relevant to specialized fields within biology, and the opportunity to work independently on a thesis or suite of course work suitable to each student’s aspirations.

The Department of Biology is composed of faculty with access to excellent laboratory and computer facilities. The Department holds affiliations with the University of Arkansas for Medical Sciences and the Gulf Coast Research Laboratory in Biloxi, Mississippi, which expand student’s opportunities for study. For more information, visit the program’s website.

Admissions Requirements

Students applying to the master of science/master of arts program in biology should meet all the requirements for admission to the UALR Graduate School. Applications for fall semester entry are due by April 15 and spring semester entry applications are due by November 1.

In addition, the following requirements should be met:

- Baccalaureate degree in an appropriate biological discipline with a minimum GPA of 3.0 on a 4.0 scale
- Upper-level course work in four of the following six areas:
  - Cell or molecular biology
  - Ecology
  - Evolution
  - Genetics
  - Physiology or
  - Organismal biology
- Two lecture courses in physics and four lecture courses in chemistry, including inorganic and organic chemistry.
- Combined scores of 300 on the verbal and quantitative sections of the GRE general section. GRE tests must have been taken within the last five years.
Formal letter of application written by the applicant, including a personal statement of career interests and objectives.

Three letters of recommendation from persons well acquainted with the applicant. Letters from former faculty are expected. Students applying to the thesis track are encouraged to obtain a letter of support from a faculty advisor.

International students must present TOEFL scores. Minimum scores for acceptance are 525 on the paper-based test or 195 on the computer-based version, or 72 on the IBT version.

Conditional Admission

Applicants who do not meet the minimum entrance requirements may be admitted conditionally. In these cases, full admission is contingent upon successful completion of courses to remove any undergraduate deficiencies and completion of 12 graduate credits with a GPA of 3.0 or above.

Financial Aid

Graduate assistantships are available to students pursuing the thesis track. These assistantships support teaching and research activities and are available to qualified full-time students. Tuition is paid, and a stipend is provided for living expenses. Financial support is available only to those students making satisfactory progress toward their degree. Students who begin the thesis option and take one or more thesis hours but later elect to switch to the non-thesis (M.A.) track will not be eligible for financial support. Students must pay registration fees, buy textbooks, and purchase any necessary support materials. To learn about the availability of these assistantships, contact a faculty member in your area of interest or the graduate program coordinator before you plan to apply for admission.

Top

Program Requirements

Core Courses

Students will complete the following 13 credit hours:

BIOL 5415 Biometry
BIOL 7310 Experimental Design
RHET 5302, 5304, 5306, 5315, or 5317 Technical/Scientific Writing (These courses will not be required if the student obtains a suitable score on writing proficiency examination in place for the Applied Science PhD program)
BIOL 7191 Graduate Seminar (Three semesters)

Thesis (M.S.) Option Courses
This option includes the core curriculum and 17 additional hours consisting of 11 credit hours of course work, including at least three credit hours at the 7000 level or above and six thesis research hours.

Course Work (M.A.) Option Courses

This option includes the core curriculum and 23 additional hours, including at least nine credit hours at the 7000 level or above. Students may not receive credit for thesis research hours under this option.

Cell and Molecular Biology Track

This track is designed to complement the Ph.D. in Applied Science (Applied Biosciences). Admissions requirements remain the same as those already existing for the biology M.S./M.A. Writing skills must be demonstrated either through a graduate technical writing course (see existing core) or through the writing proficiency requirements in place for the Applied Science Ph.D. program. An English Writing Proficiency Exam (WPE) will be offered to all thesis track students each Fall term by the Applied Science Department. Students who select the cell and molecular biology track have two options:

Thesis (M.S.) Option

The Thesis Option includes 30 semester hours to include the core requirements (described below), three hours of seminar and six hours of thesis. The remaining hours will be electives.

Core requirements include at least one course each from three of the following six competency areas:

- Biological analysis and modeling: BIOL 5415 Biometry, BIOL 7420 Phylogenetics,
- BIOL 7310 Experimental design
- Cellular functions: BIOL 5401 Cell Biology, BIOL 5413 Immunology, BIOL 5406 Pathogenic Microbiology
- Organismal functions: BIOL 5403 Comparative Physiology, BIOL 5419 Plant Physiology, 5422 Mammalian physiology
- Genetics: ASCI 7385 Concepts in Genetic Analysis, ASCI 7387 Genetics
- Biochemistry and molecular biology: BIOL 5418 Molecular biology, ASCI 7375 Biochemistry of biological molecules
- Ecological interactions: BIOL 5412 Plant Ecology, BIOL 7311 Behavioral Ecology

Thesis and Advisory Committee

The student’s Advisory Committee will be composed of at least three faculty members, including the student’s thesis advisor if in the M.S. track. The student must select a thesis or program advisor by the end of his/her first semester and assemble an Advisory Committee by the end of his/her second semester. The thesis subject is selected by the student and the Advisory Committee by the end of the second semester. The written thesis format must follow the UALR
Graduate School’s *Dissertation and Thesis Guidelines* found on the Graduate School [website](#).

**Thesis Proposal**

At least one year prior to the thesis defense, thesis candidates must present a written proposal for his/her thesis work to the Advisory Committee.

**Thesis Defense**

Students will present and orally defend their completed master’s research before their Advisory Committees. The defenses will be open to the public and must be announced at least two weeks in advance.

**Course Work Only Option**

The Course Work (M.A.) Option includes 36 semester hours to include core requirements listed above, three hours of seminar, and the remaining courses to be electives.

**Exit Examination**

All students will be required to complete comprehensive written examinations, compiled and administered by the students’ Advisory Committees as an additional exit requirement for the M.S. degree.

**Graduation Requirements**

- Successful completion of an approved program of study with a minimum GPA of 3.0;
- Successful completion of comprehensive exit examinations;
- Successful completion of the thesis and oral defense (thesis option); and
- Successful completion of the writing and seminar requirements.

**Student Progress**

Students are expected to make satisfactory progress toward their degree. Satisfactory progress includes appropriate grades in all courses and steady progress toward research goals as determined by the student’s advisory committee. Should progress be deemed unsatisfactory, the student will be informed in writing by the program coordinator with copies to the Graduate School Disputes regarding satisfactory progress will be handled by the Biology Graduate Committee.

**Transfer Credit**

With written approval of the graduate coordinator and the department chair, a student may meet
some of the course requirements with UALR graduate courses in chemistry, integrated science and mathematics, and/or applied sciences or from the University of Arkansas for Medical Sciences. Transfer credit from any other program will generally be limited to six hours.

Courses in Biology

**BIOL 5199, 5299, 5399, 5499 Special Topics in Biology**
Prerequisites: 20 biology hours, consent of instructor (other prerequisites may be required depending on topic). Specialized areas of study in biological sciences. Credit varies with depth of content. One to four hours lecture per week; up to four hours laboratory per week. Offered on demand.

**BIOL 5201 AIDS**
Prerequisites: BIOL 1401, graduate standing. The disease AIDS; includes cell biology, the disease process, and the social, economic, legal, and political aspects related to the disease and society.

**BIOL 5305 Animal Behavior**
Prerequisites: BIOL 1401, 2403, eight additional biology hours or consent of instructor. Known behavior of various vertebrate, invertebrate phyla; emphasis on adaptive significance; special attention to mating, defensive, nutritive, social behaviors; ontogeny of behavioral patterns (where known); relationship of behavior to ecology of various animal populations. Three hours lecture per week.

**BIOL 5310 Evolution**
Prerequisites: four hours of the core science requirement, graduate standing. Basic principles of evolutionary biology: Darwinian Theory, principles of inheritance, microevolution, and speciation processes; includes the evolution of humans.

**BIOL 5311 Neurobiology**
Prerequisites: 16 hours in biology or consent of instructor; CHEM 1401 or 1403 strongly encouraged. This course examines the functioning of the nervous system, with emphasis on vertebrates- in particular, humans. The course covers the structure and function of neurons as fundamental unit of the nervous system, functional neuroanatomy, and the basic principles of nervous system development. Three hours lecture per week. Three credit hours.

**BIOL 5312 Population and Community Ecology**
Prerequisites: BIOL 3303 and at least junior standing. Graduate standing required if student enrolled in BIOL 5312. Basic principles of population ecology will be discussed, including niche concept, demography, population growth and regulation, life history patterns, sociality, competition, predation, mutualisms, and control of community structure. Dual-listed in the UALR Undergraduate Catalog as BIOL 4312. Students cannot receive graduate credit for BIOL 5312 if they have previously taken BIOL 4312. Three hours of lecture per week. Three credit hours.
**BIOL 5314 Soil Biology**  
Prerequisites: B.S. in biology or permission of the instructor. Concepts of soils are presented with emphasis on biological processes and soil/ecosystem relationships. Hands-on laboratory exercises and field exercises will supplement course lectures. Dual-listed in the *UALR Undergraduate Catalog* as BIOL 4314. This course is not open to students with credit for BIOL 4314. Three hours lecture per week. Three credit hours.

**BIOL 5315 Toxicology**  
Prerequisites: B.S. in biology or permission of the instructor. Principles of toxicology are presented with an emphasis on toxicokinetics and toxicity mechanisms. Laboratory testing, risk analysis, and study design requirements are applied to various settings. Lectures will be supplemented with case studies. Dual-listed in the *UALR Undergraduate Catalog* as BIOL 4315. This course is not open to students with credit for BIOL 4315. Three hours lecture per week. Three credit hours.

**BIOL 5401 Cell Biology**  
Prerequisites: BIOL 1402, 12 additional hours in biology, CHEM 1401 or 1403; microbiology is strongly encouraged. A study of the organization of cells as related to the structure and function of biological molecules. Emphasis is placed on eukaryotic cells. Three hours lecture, three hours laboratory per week.

**BIOL 5402 Limnology**  
Prerequisites: BIOL 1401, 2402, 2403, 3303, CHEM 1403 or equivalent. Physical, chemical characteristics of water; morphometry, physiography of lake, stream basins; ecology, taxonomy of aquatic communities; laboratory includes physical, chemical, biological sampling and analysis methods; field work includes various types of aquatic habitats and sampling methods involved; requires some extended Saturday field trips. Two lectures, one four-hour laboratory per week.

**BIOL 5403 Comparative Physiology**  
Organ function in a wide range of organisms, including vertebrates and invertebrates. A comprehensive survey of functional relationships in more than one group of animals. Three hours lecture, three hours laboratory per week. Four credit hours.

**BIOL 5404 Mammalogy**  
Prerequisites: Biology 3404, 3409, equivalent, or consent of instructor. Classification, distribution, ecology, natural history of mammals; emphasis on Arkansas species; field studies, preparation of study specimens. Two hours lecture, two hours laboratory per week.

**BIOL 5405 Ichthyology**  
Prerequisites: BIOL 1400 or 1401, 3404 or 3409 or equivalent, or consent of the instructor. Classification, phylogeny, morphology, physiology, and ecology of fishes concentrating on North American and Arkansas freshwater fishes. Three hours lecture, three hours laboratory per week.

**BIOL 5406 Pathogenic Microbiology**
Prerequisites: BIOL 1400 or 1401, 2401, or their equivalents. Survey of pathogenic microbiology, immunology, and virology with emphasis on fundamental principles of each science and their application to the diagnosis and control of human diseases. Three hours lecture, two hours laboratory per week.

**BIOL 5407 Herpetology**
Prerequisites: BIOL 3404, 3409, or equivalents, or consent of instructor. Classification, anatomy, distribution, ecology, natural history of amphibians and reptiles; emphasis on Arkansas species in field techniques, student projects, laboratory work, curatorial training. Two hours lecture, four hours laboratory per week.

**BIOL 5409 Plant Taxonomy**
Prerequisites: BIOL 1400 or 1401 2402, or their equivalents. A study of the principles of plant identification, classification, systematics, and nomenclature. Major families of flowering plants with emphasis on the floristics of the immediate area. Two hours lecture, four hours laboratory per week.

**BIOL 5410 Fisheries**
Prerequisites: BIOL 1400 or 1401, 2403, 3303 or 3409, or their equivalents, or consent of the instructor. A survey of fish management and fish culture principles and techniques including population assessment, habitat improvement, pond culture, commercial fish farming, and an introduction to fish diseases. Three hours of lecture, three hours laboratory per week.

**BIOL 5411 Ornithology**
Prerequisites: BIOL 2403, 12 additional biology hours. Selected aspects of avian biology; emphasis on ecology, evolutionary biology, natural history, classification of birds; includes lecture, discussion, laboratory, field study.

**BIOL 5412 Plant Ecology**
Study of plant species ecology (life history and reproductive biology) and vegetation ecology (abundance, structure, dispersion, patterns, and dynamics), with emphasis on quantitative methodology and management principles. Three hours lecture, two hours laboratory per week.

**BIOL 5413 Immunology**
Immunobiology and immunochemistry of humoral and cellular mechanisms of immunity. Three hours lecture, two hours laboratory per week.

**BIOL 5415 Biometry**
Prerequisites: 12 hours of biology, environmental health science, or earth science (in combination or singularly), MATH 1302 or higher numbered course, three hours of statistics or consent of instructor, graduate standing. Computer-based course in experimental design, data analysis, and interpretation; objective is the application of statistical procedures relevant to the academic emphasis of students, not statistics per se; especially beneficial to those students planning to seek an advanced degree or to go into quality control or research positions. Offered in spring on
BIOL 5416 Microscopy
Prerequisites: 15 hours of biology, graduate standing. Laboratory in the fundamental theory and practical application of light and electron microscopy including specimen preparation, photomicrography, and digital computer image processing and enhancement; topics include brightfield, darkfield, phase, differential interference contrast, polarized, and epi fluorescent light microscopy and scanning and transmission electron microscopy; emphasizes experimental design and use of the microscope as an experimental tool.

BIOL 5417 Molecular Biology
Prerequisites: 19 hours in biology including both BIOL 2401 and BIOL 3300; CHEM 1401 or 1403; B.S. in biology or permission of instructor. Successful completion of either BIOL 3400 or BIOL 4401 is strongly encouraged. A study of molecular biology theory and practice. Emphasis is on the study of model systems to understand the current approaches and laboratory techniques necessary to answer basic questions in current molecular biology. Two hours of lecture and four hours of laboratory per week.

BIOL 5418 Biotechnology
Prerequisites: 19 hours of biology including 2401 and 3300; CHEM 1401 or 1403. BIOL 3400 and 4401/5401 are strongly recommended. BIOL 4417/5417 is also recommended or may be taken concurrently. A study of the applied science of biotechnology designed to introduce students to the elements of a biotechnological career. Topics range from traditional biotechnology such as animal and plant tissue culture to contemporary molecular biotechnology and the use of recombinant DNA technology and genetic engineering in research and industry. Emphasis will be placed on current biomedical, pharmaceutical, and agri/industrial applications. Graduate students must complete and defend a term paper. Two hours lecture, four hours laboratory per week.

BIOL 5419 Plant Physiology
Prerequisites: BIOL 1400 or 1401, 2402, CHEM 2450, or their equivalents, or consent of instructor. Study of water relations, nutrition, and metabolism including photosynthesis, growth, and development. Two hours lecture, four hours laboratory per week.

BIOL 5421 Introduction to Geographic Information Systems
Prerequisites: ERSC 2320 or ENHS 3415 or BIOL 4309, or consent of instructor. This course introduces Geographic Information Systems (GIS) and the use of spatial data for problem-solving in science. The lecture portion of the course focuses on the data models used to represent spatial features and on the processes involved in creating, acquiring, analyzing, and displaying georeferenced information. The laboratory portion of this course employs a project-based methodology including applications from geology, biology, environmental science, and political science to foster basic GIS software proficiency. Two lecture hours per week, four laboratory hours. Four credit hours.

BIOL 5422 Mammalian Physiology
General physiological principles and a treatment of functions and interrelations of mammalian systems. Three hours lecture, two hours laboratory per week. Four credit hours.

**BIOL 5423 Plant Anatomy**
Detailed coverage of the microscopic anatomy of all the organs of seed plants and a critical evaluation of the major tissue types found within these plant organs. Two hours lecture, hour hours laboratory per week. Four credit hours.

**BIOL 5424 Entomology**
Prerequisites: BIOL 3303 or equivalent, or permission of the instructor. A study of insects including their anatomy, physiology, behavior, development, diversity, classification, and economic importance. Two hours lecture, four hours laboratory. Four credit hours.

**BIOL 5426 Plant and Human Nutrition**
Prerequisites: B.S. in Biology or permission of the instructor. Plant nutrition refers to the needs and uses of the basic chemical elements in the plants, which are essential for plant growth and development. Thus, plant nutrition is an area of fundamental importance for both basic sciences (Plant physiology, Plant cell and molecular biology, Plant development) and applied sciences (Agronomy, Crop physiology, Horticulture, Human nutrition and health). Human nutrition refers to the needs and uses of the basic chemical elements and compounds in the human body, which are essential for human development and healthy life. The course consists of lectures, laboratory exercises, and case studies. Dual-listed in the hours lecture, and four hours laboratory per week. Four credit hours.

**BIOL 5427 Tissue Engineering**
Prerequisites: B.S. in Biology or the permission of the instructor. Tissue engineering (TE) is defined as the development and manipulation of laboratory-grown molecules, cells, tissues, or organs to replace and/or support the function of injured body parts. TE applies the principles and methods of biology, stem cell biology, immunology, life sciences, physical sciences, engineering, cell and drug delivery, nanobiotechnology, and bioinformatics to understand physiological and pathological systems and to modify and create cells and tissues for therapis for structural tissue repair (e.g., skin, bone, cartilage, tendon, muscle, and blood vessel), for enhancing metabolic function (e.g., liver), for improved drug delivery (localized delivery of a drug), and as a vehicle for cell-based gene therapy. Dual-listed in the UALR Undergraduate Catalog as BIOL 4427. The course consists of two hours of lectures and four hours of laboratory per week. This course is not open to students with credit for BIOL 4427. Four credit hours.

**BIOL 7110 Independent Study**
Independent study provides an opportunity for a student to gain depth in a specialized area to support a particular aspect of their research. The specific topic and course of study will vary by student and are to be developed with a faculty member in the department and the student’s advisory committee to augment the student’s background in a specific area or to fill a gap in knowledge when no regularly-scheduled courses are available. No more than two hours of independent study may be counted toward a graduate degree.
**BIOL 7210 Independent Study**  
Independent study provides an opportunity for a student to gain depth in a specialized area to support a particular aspect of their research. The specific topic and course of study will vary by student and are to be developed with a faculty member in the department and the student’s advisory committee to augment the student’s background in a specific area or to fill a gap in knowledge when no regularly-scheduled courses are available. No more than two hours of independent study may be counted toward a graduate degree.

**BIOL 7191 Graduate Seminar**  
Prerequisites: graduate standing and consent of graduate coordinator. Students, faculty, and invited speakers present, discuss, and exchange ideas on research topics and methods in biology. MS students required to enroll three times and obtain three hour credit. Graded C/NC.

**BIOL 7199, 7299, 7399 Selected Topics in Biology**  
Prerequisites: Graduate standing or consent of instructor. Advanced studies in specialized areas of biological science, such as cell and molecular biology, microbiology, genetics, organizational biology, ecology, fisheries and wildlife management. One to three hours lecture per week depending on credit hours. Offered on demand.

**BIOL 7310 Experimental Design in Biology**  
Prerequisites: Graduate standing and 4415/5415 Biometry or equivalent. Experimental design in biology is designed to provide students with an appreciation of the utility of a rigorous experimental design and the use of inferential statistics in research with biological systems. Students will be given a background in the statistical requirements of manipulative experiments and will critique research designs in recently published literature.

**BIOL 7311 Behavioral Ecology**  
Prerequisites: BIOL 3303, BIOL 4305/5305 or the equivalent or consent of the instructor. This course is a broad introduction to the field of behavioral ecology and how evolutionary and ecological constraints shape behavioral strategies and tactics. Topics to be addressed include the evolution of life histories, reproductive decisions, resource acquisition and utilization, and the costs and benefits of sociality. Three hours lecture per week. Computer exercises during some scheduled lecture times will include foraging and habitat use models, game theory, and species interaction models.

**BIOL 7410 Phylogenetic Analysis**  
Prerequisite: Graduate standing and completion of two courses (or equivalent) from the following: Biometry (BIOL 4415/5415), Linea Algebra (MATH 3312), Mathematical Models (MATH 3324), Molecular Biology (BIOL 4417/5417). Student may also enroll with the consent of the instructor. A computer based course in phylogenetic analysis of molecular sequence data through the use of both distance and character based models. Parsimony, maximum likelihood, and Bayesian inference are key procedures used to assess, test and characterize molecular evolution. Two hours lecture and four hours laboratory per week. Four credit hours.
**BIOL 7499 Selected Topics in Biology**
Prerequisites: Graduate standing or consent of instructor. Advanced studies in specialized areas of biological science, such as cell and molecular biology, microbiology, genetics, organismal biology, genetics, ecology, fisheries and wildlife management. Two or three hours lecture per week and 2-4 hours laboratory per week. Offered on demand. Four credit hours.

**BIOL 8100, 8200, 8300, 8400 Thesis Research**
Prerequisite: full admission to the program. Thesis research in biology is designed to provide students with graduate level research experience. Under the directions of the student’s major advisor and graduate committee, the student will carry out original research to support his/her thesis.

**Environmental Health Science**

The Department of Environmental Health Science has no graduate programs; however, many of the department’s courses are used in other programs.

Carl Stapleton, Director, Environmental Health Sciences Program, (501) 569-3501

**Courses in Environmental Health Science**

**ENHS 5199, 5299, 5399 Special Topics in Environmental Health Sciences**
Prerequisite: graduate standing or consent of instructor. Topics include specialized areas of environmental health sciences. Credit varies depending on depth of content. One to three hours lecture per week. Offered on demand.

**ENHS 5410 Environmental Planning**
Prerequisites: ENHS 2320, or consent of instructor. The planning process and evaluation methods applicable to various environmental programs are addressed. Resource allocation and procurement topics are included as appropriate to environmental planning. Case studies are presented which include areas such as watershed planning, land use, solid and hazardous wastes, air quality, and energy. Group discussions, role playing exercises, computer exercises and field study tasks will supplement class lectures.

**ENHS 5415 Environmental Impact Analysis**
Prerequisites: ENHS 3310, ENHS 3340 or 3350, RHET 3316, BIOL 3303 and 3103, STAT 4350, or consent of the instructor. This course provides individuals with knowledge and skills necessary to prepare and review environmental assessments (EAs) and environmental impact statements (EISs). The National Environmental Policy Act (NEPA) and its key components are presented for discussion. Case studies and group discussions are used to supplement class lectures. Field and laboratory exercises appropriate to the environmental impact analysis (EIA) process will be presented and used to prepare an EA for a selected site.

**ENHS 5430 Environmental Epidemiology**
ENHS 3340 or 3350, BIOL 2401, STAT 4350, or consent of the instructor. The principles of environmental epidemiology are introduced with specific emphasis on its application to various environmental settings. Statistical methods used for analyzing environmental epidemiological data are introduced. Computer applications will be presented in lecture and laboratory sessions. The role of environmental epidemiology in anti-bioterrorism programs will be presented. Lectures will be supplemented with laboratory computer exercises, site visits, and field studies.
The Master of Arts and Master of Science programs in chemistry provide advanced preparation for careers in government or industrial research or for doctoral study. The programs’ curricula are a blend of traditional and nontraditional innovative courses that reflect the needs of modern chemistry. The UALR Department of Chemistry offers research-quality instrumentation and computer facilities as well as individual attention to each student and a high quality of instruction. Please visit the department’s website.

Admission Requirements

- Baccalaureate degree from an accredited institution with a cumulative grade point average of at least 2.75 (4.0 scale), or 3.0 in the last 60 hours
- Entering students will be counseled and placed in appropriate courses based on their performances on placement tests in the four sub-disciplines of chemistry.

Graduate Assistantships

A limited number of graduate assistantships are available. Contact the program coordinator for information. International applicants for teaching assistantships must have an overall score of at least 50 on the Test of Spoken English. (The testing facility must send scores to the program coordinator).

Program Requirements

Both chemistry degrees require at least 30 graduate chemistry hours, including at least three of four core courses (CHEM 7311 Analytical, 7340 Inorganic, 7350 Organic, 7370 Physical), as determined by the department’s graduate programs committee.

The master of science degree requires CHEM 8100-8400 Thesis Research and 7190 Graduate Seminar. The student selects a thesis advisor and a specific thesis research project, then researches, writes, and orally defends a thesis (11 credit hours).

For the master of arts degree, 12 approved course hours replace the thesis and seminar hours. The remaining hours are elective and might include graduate chemistry courses of specific
interest to the student; up to three graduate chemistry hours transferred from another school; up to three approved graduate hours from another UALR department; or up to six 5000-level hours.

Graduation Requirements

- Cumulative GPA of at least 3.0 on an approved program of study as outlined above
- Successful completion of written thesis and oral defense (M.S. only).

Courses in Chemistry

**CHEM 5251 Organic Preparations**
Prerequisite: CHEM 3151 or 4250. Advanced experiments in organic chemistry using special apparatus and techniques. Two three-hour laboratories per week. Offered on demand.

**CHEM 5321 Biochemistry II**
Prerequisites: CHEM 4420 or 5420. Continuation of Biochemistry I, covering energy generation, metabolism of lipids and amino acids, integration of metabolism, DNA replication and repair, transcription, translation, and control of gene expression. Dual-listed in the UALR Undergraduate Catalog as CHEM 4321. Students who have completed CHEM 4321 may not enroll in CHEM 5321. Lecture three hours per week. Three credit hours.

**CHEM 5330 History of Chemistry**
Prerequisite: CHEM 3350 with C or greater. This course is a survey of the growth and development of chemistry. Lectures will stress connections of modern commissarate to past chemists/scientists and how ideas are passed from generation to generation. The personality and human side of the scientists will be emphasized along with the interactions between science and society. Dual-listed in the UALR Undergraduate Catalog as CHEM 4330. Students who have completed CHEM 4330 may not enroll in CHEM 5330.

**CHEM 5340 Inorganic Chemistry**
Prerequisite or co-requisite: CHEM 3340, and 3572 or 3371 (3371 may be taken as corequisite). A study of inorganic chemistry with detailed emphasis on chemical bonding of covalent molecules, transition metal complexes and their bonding theories, spectroscopy of inorganic complexes, magnetism, organometallic chemistry with catalysis, and introduction to bioinorganic chemistry. Laboratory will reinforce concepts developed in lecture. Required for B.S. major. Dual-listed in the UALR Undergraduate Catalog as CHEM 4340. Students who have completed CHEM 4340 may not enroll in CHEM 5340. Lecture two hours and laboratory three hours per week. Three credit hours.

**CHEM 5342 Environmental Chemistry**
Prerequisites: CHEM 3350 and CHEM 2310 with grade of C or greater. A survey of environmental
chemistry. Topics covered will include: Composition of the atmosphere and behavior; energy and climate; principles of photochemistry and surfactants; halogenics and pesticides, water and air pollution (tropospheric and stratospheric) and connections to climate change; elemental and molecular environmental chemistry in geological media; water cycle and water treatment; principles of nuclear chemistry and radiochemistry; nuclear environmental chemistry; and evaluation of energy sources that are sustainable. dual-listed in the UALR Undergraduate Catalog

Students who have completed CHEM 4342 may not enroll in CHEM 5342. Lecture three hours per week. Three credit hours.

**CHEM 5350 Intermediate Organic Chemistry**
Prerequisite: CHEM 3351. Reaction mechanisms; correlation of structure with reactivity; literature survey of recent advances in the field. Three hours lecture per week. Offered on demand.

**CHEM 5360 Medicinal Chemistry**
Prerequisites: General Organic Chemistry I and II, CHEM 3350 and 3351, General Organic Laboratory 1 CHEM 3151, and General Organic Laboratory II CHEM 3151 or Qualitative Organic Analysis Laboratory CHEM 3250, all with grades of C or greater. This course will serve as an introduction to the chemistry and theory of drug action that includes general drug design, drug-receptor interactions, drug design through enzyme inhibition, pharmacokinetics, and drug metabolism. Additionally, the mechanism of specific drug classes will be examined. Three hours lecture per week. Three credit hours. This course cannot be used as a substitute for the Biochemistry requirement of the ACS certified degree.

**CHEM 5380 Introduction to Polymer Chemistry**
Prerequisites: CHEM 3151 and 3351 or 4250 (recommended but not required: Chemistry 3170, 3271, 3371, 3470, 3572). Coordination of theoretical, practical aspects; includes history, types of polymerizations, kinetics, molecular weight, physical properties including thermal and spectroscopic characterization, biopolymers, engineering resins. Two hours lecture, three hours laboratory per week. Offered in spring on even years.

**CHEM 5399 Special Topics in Chemistry**
Prerequisite: consent of instructor. Topics may include chemical carcinogenesis, environmental chemistry, solid state chemistry, radiochemistry, macromolecules, surface chemistry, quantum chemistry, others. Three hours lecture per week. Offered on demand.

**CHEM 5411 Instrumental Analysis**
Prerequisites: CHEM 2310 and 2311; PHYS 1322 or 2322. Most common modern instrumental methods of analysis; includes topics in spectroscopy, electrochemistry, chromatography. Three hours lecture, one four-hour laboratory per week. Offered in fall.

**CHEM 5420 Biochemistry I**
Prerequisites: CHEM 2510, 3151, 3351. Basic chemistry and metabolism of proteins, lipids, carbohydrates, nucleic acids; action of vitamins, hormones, enzymes. Three hours lecture, three
hours laboratory per week. Offered in spring.

**CHEM 7190 Graduate Seminar**
Prerequisites: graduate standing, consent of thesis advisor and graduate coordinator. Students, faculty, and invited speakers will present, discuss, and exchange ideas on research topics of chemical interest. Required of the M.S. student. Credit must be received at least one semester before enrollment in the last research semester. One hour session per week. Course may not be repeated for credit. Graded credit/no credit. Offered in fall and spring.

**CHEM 7240 Inorganic Preparations**
Prerequisite: CHEM 4411/5411 or equivalent. Techniques of synthesis and identification of inorganic compounds. Six hours laboratory per week. Offered on demand.

**CHEM 7311 Advanced Analytical Chemistry**
Prerequisite: CHEM 4411/5411 or equivalent. Complex solution equilibria and selected topics in spectroscopy, electro-analytical techniques, separations procedures. Three hours lecture per week.

**CHEM 7317, 7318, 7319 Selected Topics in Analytical Chemistry**
Prerequisite: consent of instructor. Topics may include electro-analytical techniques, modern functional group analysis, instrumental design and control, others. Offered on demand.

**CHEM 7340 Advanced Inorganic Chemistry**
Prerequisite: CHEM 4340/5340 or equivalent. Advanced theoretical concepts; includes atomic structure, molecular and solid structures, bonding, ligand field theory, organometallic chemistry, metals chemistry, reaction mechanism. Three hours lecture per week.

**CHEM 7347, 7348, 7349 Selected Topics in Inorganic Chemistry**
Prerequisite: CHEM 4340/5340. Topics may include magnetochemistry, X-ray crystallography, chemistry of diamond-like semiconductors, chemistry of rare earth elements, chemistry of boron and its compounds, reaction mechanisms, others. Three hours lecture per week. Offered on demand.

**CHEM 7350 Organic Reaction Mechanisms**
Prerequisites: CHEM 3350 or equivalent, 3351 or equivalent. Reaction mechanisms of classical organic reactions; includes ionic and free radical addition and substitution, oxidation, reduction, elimination reactions. Three hours lecture per week. Offered in fall.

**CHEM 7351 Modern Synthetic Reactions**
Prerequisites: CHEM 3350 or equivalent, 3351 or equivalent. Modern organic reactions, their applications in synthesis. Three hours lecture per week. Offered on demand.

**CHEM 7357, 7358, 7359 Selected Topics in Organic Chemistry**
Prerequisites: CHEM 3350, 3351. Topics may include natural products, stereochemistry,
photochemistry, heterocyclic compounds, free radicals, carbenes, polymers, others. Three hours lecture per week. Offered on demand.

**CHEM 7370 Physical Principles of Chemical Reactivity**
Prerequisites: CHEM 3371 or equivalent, 3470 or equivalent. Chemical, physical properties of selected species in terms of thermodynamics, kinetics, molecular structure; examples in scientific literature illustrate how physical chemistry principles may be applied to chemical reactivity. Three hours lecture per week. Offered in spring.

**CHEM 7371 Chemical Thermodynamics**
Prerequisites: CHEM 3371, 3470. Application of the three laws of thermodynamics to chemical systems; relates spontaneity and equilibrium in gaseous, heterogeneous-phase, and solution reactions to thermal, electrochemical measurements. Three hours lecture per week. Offered on demand.

**CHEM 7372 Chemical Kinetics**
Prerequisites: CHEM 3371, 3470. Chemical reaction rates; includes determination of empirical rate laws, collision and transition state theories, activation energy and catalysis, reaction mechanisms, kinetic intermediates. Three hours lecture per week. Offered on demand.

**CHEM 7377, 7378, 7379 Selected Topics in Physical Chemistry**
Prerequisites: CHEM 3371, 3470. Topics may include quantum chemistry, statistical thermodynamics, semi-empirical molecular orbital calculations, molecular spectroscopy and photochemistry, states of matter, mathematical methods in chemistry, others. Three hours lecture per week. Offered on demand.

**CHEM 7390 Selected Topics for Teachers**
Prerequisites: experience in teaching secondary science and/or consent of instructor (based on assessment of student’s chemistry background). For secondary science teachers to improve and extend their knowledge of basic chemical concepts. These concepts are related to modern chemical topics wherever possible. Laboratory emphasizes techniques for conducting classroom demonstrations. Two hours lecture, three hours laboratory per week. Offered on demand.

**CHEM 8100-8400 Thesis Research**
Prerequisites: consent of coordinator, thesis advisor. Scholarly investigation of a selected chemical problem, culminating in a written thesis with oral defense; student presents a seminar on the research in the last course/hours, typically during the final semester, to faculty and fellow students. Eleven hours required for M.S. degree. May not be applied to the M.A. degree. Variable credit. Credit/no credit grade based on written progress reports.
Integrated Science and Mathematics

Admissions | Program Requirements | Graduate Courses

FA 210, (501) 569-3296

Master of Science in Integrated Science and Mathematics

The Master of Science in Integrated Science and Mathematics (MSISM) degree is designed to serve populations of graduate students whose interests and needs for professional development transcend traditional disciplinary boundaries. The program gives the student the opportunity to combine graduate courses from many departments, allowing them to design a program to suit their needs. Courses address the challenges and methods of study in such areas as STEM education, environmental science, forensic sciences, integrated natural and life sciences, and mathematics disciplines. Students pursuing this degree will be able to construct a variety of rigorous, innovative, and non-traditional interdisciplinary programs.

Students in this program come from a variety of undergraduate fields, including biology, chemistry, environmental health sciences, earth sciences-geology, physics, health sciences, and mathematics. Professionals currently employed in environmental sciences, medical research support, and forensic science and others who are interested in integrating the sciences would particularly benefit from this degree.

Admission Requirements

- Official copies of all transcripts.
- GPA of at least 2.75 overall, or 3.0 in the last 60 hours.
- Three letters of reference.
- A 1-2 page Curriculum Vita or resume.
- A minimum score of 147 on the verbal and 147 on the quantitative sections of the GRE general section. GRE tests must have been taken within the last five years. Applicants with a 3.5 or greater GPA on their last 60 hours are not required to take the GRE.
- International students must present TOEFL scores. Minimum scores for acceptance are 525 on the paper-based test or 195 on the computer-based version.

All undergraduate work will be assessed prior to acceptance into the degree program and deficiencies will be defined at that time. All deficiencies must be removed before students progress into the program.

Program Requirements
The MSISM degree combines writing, thinking, and analyzing skills with study of specialized knowledge in several science disciplines and mathematics. The program requires 36 semester hours of graduate course work for the Course Work Option and 30 semester hours of graduate course work for the Thesis or Project Option. Students must take a minimum of 18 semester credit hours of graduate-level work which emphasizes the interdisciplinary content in at least two of the following traditional disciplines:

- Biology
- Chemistry
- Environmental Health Science
- Geology-Earth Science
- Health Science
- Physics and Astronomy
- Mathematics

Additional course work may come from outside the College of Arts, Letters, and Sciences. The course work curriculum must be approved by the student’s adviser and by the Integrated Science program director.

Possible degree combinations with sample curriculum content blocks are as follows:

**Biology – Chemistry**

18 credit hours in biology and chemistry

Three credit hours of technical writing

Three credit hours of applied science

Six credit hours of thesis or project

**Biology – Earth Science**

18 credit hours of biology and earth science

Three credit hours of statistics

Three credit hours of technical writing

Six credit hours of thesis or project

**Mathematics – Earth Science**

32 credit hours of mathematics and earth sciences
Four credit hours of integrated science and mathematics

Please contact the program director to discuss additional degree combinations.

Thesis or Project Option

A six credit-hour project or thesis is required for students in the Thesis or Project Option. For both the Thesis and Project Options, the student will have a three person graduate committee composed of at least one faculty member from each area of emphasis with one faculty member serving as the student’s advisor. The advisor, with input from the committee, will recommend which option, Thesis or Project, is right for optimizing the student’s educational goals and develop a curriculum for the student.

The topic of thesis study and the scope of the study are designed by the student in consultation with the student’s adviser. Theses require a formal thesis proposal that must be approved by the student’s committee. Thesis studies are hypothesis-driven lines of scientific inquiry that demonstrate a student’s ability to:

- identify a scientific problem,
- design a plan to examine the problem,
- carry out the plan,
- interpret the results of the study, and
- defend the interpretations in the form of an oral defense.


Projects are scholarly activities that do not fit within the scope of a traditional thesis. Projects require a formal proposal and must be approved by the student’s committee. A formal document may not be appropriate for all projects. Documentation of the project is required, as is a formal presentation of the project. The formal presentation of the project must be approved by the student’s committee.

For students in the Course Work Option, an additional 12 credit hours of graduate course work is required beyond 24 hours for a total of 36 hours. Students in this option will have a course work committee composed of a faculty advisor from each of the areas of emphasis that the student has selected. This committee will meet with the student each semester to discuss the student’s progress, and it will approve all course work.

Courses in Integrated Science and Mathematics

A list of courses in Integrated Science (IGSC) with descriptions is provided below. Course listings
and descriptions for earth science, physics, biology, chemistry, environmental science, and applied science are found in the “Graduate Courses” section of this Catalog.

**IGSC 5401 Integrated Science Methods**
Prerequisite: at least 16 hours of science. This course incorporates lecture, laboratory work, and field methods to stress the learning of science as an active, integrated constructive process that involves experimentation, investigation, communication, reasoning and problem solving as they apply to life, earth and physical systems. Three hours of lecture per week and two hours of laboratory per week.

**IGSC 7192,7292,7392 Independent Study**
Independent study provides an opportunity for students to gain depth in a specialized area to support a particular aspect of their degree program. The specific topic and course of study for the independent study will vary by student. The student will develop the course of study in collaboration with a faculty member in the department and their academic adviser.

**IGSC 7195/7295/7395 Internship in Integrated Science and Mathematics**
Prerequisites: graduate standing and consent and approval of assignment by advisor. Supervised professional experience related to students discipline with governmental agencies, industry and consulting firms. Forty hours supervised work per credit hour. One, two, or three credit hours.

**IGSC 7199, 7299, 7399, 7499 Special Topics**
Prerequisites: variable, depending on instructor and course content. Courses will cover topics that draw from two or more scientific disciplines and that can be best taught from an integrated perspective. Credit and laboratory/lecture format vary depending on the topic. One hour of credit per one hour of lecture; one hour of credit per two-three hours of laboratory.

**IGSC 7301 Higher Order Thinking in Science**
Prerequisite: consent of the instructor. Laboratory-based; stresses the learning of science as active, integrated, constructive processes involving experimentation, investigation, communication, reasoning, and problem solving; show connections and relevant applications in life systems, earth systems, and physical systems; goals include helping teachers extend content learning and create successful learning environments for every student through use of manipulative s, calculators, science equipment, and various learning strategies; provides access to appropriate materials, equipment, and technology. Two hours of lecture and two hours of laboratory per week.

**IGSC 7391 Cooperative Education in Integrated Science**
Prerequisites: graduate standing and consent and approval of assignment by advisor. Supervised professional experience related to students discipline with governmental agencies, industry, and consulting firms. This course requires a minimum of 200 semester work hours. Three credit hours.

**IGSC 8100, 8200, 8300 Thesis Research**
Under the supervision of the student’s major advisor, along with the graduate advisory committee, the student will carry out original research to support his thesis. May be taken for a maximum of six hours.
The Master of Science in Mathematical Sciences program provides advanced preparation for careers in private industry and government or for doctoral study. It is designed to accommodate full-time employees and can be completed in two years by including summer classes. Concentrations are offered in applied mathematics, applied statistics, computational sciences, and interdisciplinary mathematics. Computer labs are available with research-quality mathematical and scientific software.

The program is continually adding to and updating its software and a number of courses in the program require computer use. Applied mathematics is critical to most areas of today’s highly technological workforce, and the master’s program is a passport to this exciting and expanding career field. For more information visit the mathematical sciences program [website](#).

### Admission Requirements

- Baccalaureate degree from an accredited institution with a cumulative grade point average of 2.75 (4.0 scale) or 3.0 in the last 60 hours.
- Courses with a grade of C or greater in matrix algebra, differential equations, an advanced calculus sequence, statistical methods, and a scientific programming language.
- Six appropriate advanced mathematics hours with grades of C or greater (i.e., Analysis, Topology, Numerical Analysis, Mathematical Statistics)
- Official Graduate Record Examination score.
- Letters of Recommendation.
- Writing Sample.

Applicants lacking prerequisite classes must complete specified preparatory courses. Contact the program coordinator for details.

### Program Requirements

The mathematical sciences degree requires 33 graduate semester credit hours with a master’s research project or 36 graduate credit hours without the project, including 12 core hours; three research project hours or six alternate hours; nine hours of mathematical emphasis courses; nine hours from specialization; and written and oral comprehensive examination. In addition, the Graduate Record Examination general and mathematics sections must be taken during the first semester.

The written comprehensive examination covers material from the four core courses – MATH 7323
Advanced Numerical Analysis I, MATH 7350 Mathematical Statistics I, MATH 7311 Advanced Linear Algebra, and MATH 7322 Advanced Differential Equations. The oral comprehensive examination consists of a presentation from the student’s area of specialization and a question and answer session derived from the student’s course work.

Core Courses

MATH 7311 Advanced Linear Algebra
MATH 7322 Advanced Differential Equations
MATH 7323 Advanced Numerical Analysis I
MATH 7350 Mathematical Statistics I

Graduate Assistantships

A limited number of graduate assistantships are available. Contact the program coordinator for information.

Specializations

There are two areas of specialization: applied mathematics and applied statistics.

Applied Mathematics

This specialization requires 33 semester credit hours, the research project, or 36 semester hours without the research project. In addition to the 12 hours of core courses listed above, the degree requires nine hours of mathematical emphasis courses, nine hours of elective courses, MATH 8300, and written and oral comprehensive examinations.

Emphasis Courses

MATH 7312 Computational Linear Algebra
MATH 7324 Advanced Numerical Analysis II
MATH 7325 Partial Differential Equations

Approved Electives

MATH 5302 Complex Analysis
MATH 5308 Integral Transforms
MATH 7351 Mathematical Statistics II
MATH 7352 Mathematical Statistics III
MATH 7353 Linear and Nonlinear Regression
MATH 7354 Experimental Design
MATH 7355 Sampling Techniques
MATH 7399 Selected Topics
MATH 5305 Financial Math

Applied Statistics

This program is designed to place students into an industry working as a statistician. In addition to the 12 hours of core courses listed above, the degree requires MATH 7351, 7352, and 7353, nine hours of courses in an area of emphasis, MATH 8300 or six hours of approved electives, and written and oral comprehensive examinations.

Approved Electives

- MATH 7354 Experimental Design
- MATH 7355 Sampling Techniques
- MATH 7312 Computational Linear Algebra
- MATH 7399 Selected Topics
- MATH 5305 Financial Math

Emphasis Areas

- MATH 7399 Special Topics
- MATH 7354 Experimental Design
- MATH 7355 Sampling Techniques

Examples of elective courses include:

- STAT 7343 Programming in SAS
- MATH 7350 Mathematical Statistics I
- MATH 7351 Mathematical Statistics II
- MATH 7352 Mathematical Statistics III
- MATH 7353 Linear and Nonlinear Regression Models
- MATH 7354 Experimental Design

Graduation Requirements

- Successful completion of an approved program of study.
- Pass both the written and oral comprehensive exams.

Courses in Mathematics

**MATH 5199, 5299, 5399 Selected Topics**
Prerequisites: graduate standing, consent of instructor. Content varies; see semester schedule. One hour lecture per week for each hour of credit. Offered on demand.

**MATH 5301 Analysis I**
Prerequisites: MATH 2307, 3312. Real number system, Euclidean n-space, complex numbers, topology of general metric spaces, continuous functions, point-wise and uniform convergence, series, the derivative. Offered on demand.

**MATH 5302 Complex Analysis**
Prerequisite: grade of C or greater in MATH 5303. Algebra of complex numbers, analytic functions, integration, power series, Laurent series, elementary conformal mappings. Three hours lecture per week.

**MATH 5303 Advanced Calculus I**
Prerequisites: MATH 2307, 3312. Real number system, sequences, limits, continuity, metric spaces, convexity, derivatives, linear analysis, implicit function theorem.

**MATH 5304 Advanced Calculus II**
Prerequisite: MATH 4303/5303. Measure theory, geometry of curves and surfaces, differential forms, Stoke’s theorem, and Green’s theorem.

**MATH 5305 Financial Mathematics**
Prerequisites: Math 1451 or equivalent. Determining equivalent measures of interest; discounting; accumulating; determining yield rates; estimating the rate of return on a fund; amortization. Three credit hours.

**MATH 5308 Integral Transform Theory**
Prerequisite: MATH 3322. Linear differential equations; Laplace transform; functions of complex variable, integration by method of residues, Laplace transform inversion integral; Z- transform, Z-transform inversion integral, difference equations; Fourier series, Fourier transform.

**MATH 5323 Numerical Analysis**
Prerequisites: MATH 2307 or equivalent, 3312 or equivalent; scientific programming language. Error analysis, solutions of equations, interpolation, approximations, numerical differentiation and integration, linear systems.

**MATH 7311 Advanced Linear Algebra**
Prerequisite: MATH 3312. Vector spaces, subspaces, linear independence and dependence, basis and dimensions; linear transformations, null space, rank, isomorphism, inner product spaces, norms, inner products, orthogonal sets, orthogonal projections, bilinear and quadratic forms; eigen values and eigen vectors, similar matrices, diagonalization, symmetric and Hermitian matrices. Jordan canonical form. Three lecture hours per week.

**MATH 7312 Computational Linear Algebra**
Prerequisites: MATH 3312 and MATH 4323. LU decomposition; QR factorization; Iterative techniques for solving systems of equations, Gauss-Seidel; Eigen value problem, iterative and direct techniques, The Condition Number; Lanczos Algorithm. Three lecture hours per week.
MATH 7322 Advanced Differential Equations

MATH 7323 Advanced Numerical Analysis I
Prerequisites: MATH 4323, 7311. Numerical solutions of linear operator equations, some nonlinear systems, optimization methods.

MATH 7324 Advanced Numerical Analysis II
Prerequisites: MATH 7323 and 7325. Numerical analysis of ordinary and partial differential equations. Three lecture hours per week.

MATH 7325 Partial Differential Equations
Prerequisites: MATH 3322 or equivalent course. First order equations in two independent variables, the method of characteristics, discontinuous and weak solutions; Linear second order equations, elliptic equations, hyperbolic equations, parabolic equations; Fourier series. Three lecture hours per week.

MATH 7326 Optimization
Prerequisites: MATH 3312 and 3322 or equivalent courses. Linear and nonlinear programming. Three lecture hours.

MATH 7327 Graph Theory
Prerequisites: MATH 3312 or equivalent course. Graphs and subgraphs; trees; connectivity; Euler tours and Hamiltonian cycles; matchings; planar graphs; directed graphs; networks. Three lecture hours per week.

MATH 7330 Theory of Finite Element Methods
Prerequisites: Math 2453 and Math 3322 or equivalent. Finite element method is a numerical technique for finding approximate solutions of partial differential equations. It has strong applications in engineering. This course will provide mathematical foundation for finite element method. Three lecture hours per week. Three credit hours.

MATH 7350 Mathematical Statistics I
Probability measures, combinatorial theory, random variables, continuous and discrete distributions, expectations, moments, jointly distributed random variables, independence, functions of a random variable, limit theorems.

MATH 7351 Mathematical Statistics II
Sampling, sampling distributions, order statistics, point estimators and their properties, interval estimators and their properties, tests of hypotheses, linear models, nonparametric methods.

MATH 7352 Mathematical Statistics III
Prerequisites: MATH 7350. Multivariate distribution theory and quadratic forms; Linear models and least squares; Analysis of categorical data; Non-parametric statistics; Decision theory and Bayesian inference. Three lecture hours per week.

**MATH 7353 Linear/Non-Linear Regression**
Prerequisites: MATH 7350. Differentiation of vectors and matrices; random vectors and matrices; distribution theory; full rank linear regression models; non-linear regression models. Three lecture hours per week.

**MATH 7354 Experimental Design**
Prerequisites: MATH 7350 (may be taken as a corequisite with the consent of the instructor). Single factor experiments; Randomized blocks and Latin square designs; factorial designs; repeated measures; nested designs; response surfaces. Three lecture hours per week.

**MATH 7313 Real Analysis**
Prerequisites: a grade of C or greater in MATH 4302/5302. Set theory and axioms, functions of a real variable, Lévesque measure, differentiation and integration, Branch Spaces

**MATH 7355 Sampling Techniques**
Prerequisites: MATH 7350 (may be taken as a corequisite with the consent of the instructor). Simple random sampling; sampling for proportions; stratified random sampling; ratio estimators; systematic random sampling; cluster sampling; acceptance sampling. Three lecture hours.

**MATH 7399 Selected Topics in Applied Mathematics**
Prerequisite: consent of instructor. Topics in mathematics, applied mathematics, and numerical analysis may include discrete mathematics; ordinary, partial differential equations; integral transforms; complex variables; optimization techniques, linear algebra; approximation theory; topology; geometry; abstract algebra; number theory. Topics in statistics may include statistical inference, sampling, linear models, biostatistics, stochastic processes, statistical computing. May be repeated for credit when topic changes. Offered on demand.

**MATH 8300 Master Research Project**
Prerequisite: 18 graduate hours. Research and individual investigation on a topic in applied mathematics.
The College of Business (COB) offers the following graduate degrees:

- Master of Business Administration (MBA)
- Master of Science in Business Information Systems (M.S. in BIS)
- Graduate Certificate Programs
  - Graduate certificate in Business Analytics (BUAL-GC)
  - Graduate certificate in Management (MGMT-GC)
  - Graduate certificate in Business Information Systems (BINS-GC)

The COB partners with the Bowen School of Law to offer concurrent MBA-JD degrees and with UAMS to offer concurrent MBA-PharmD and MBA-MD programs. In addition, the COB offers graduate Certificates in Business Analytics, Management, and Business Information Systems. A brief description of each of these programs follows.

The **Master of Business Administration (MBA)** is for students with liberal arts, scientific, or other professional backgrounds as well as students with prior business studies. At the completion of the MBA program, students should be able to demonstrate the following:

- an understanding of the strategically interrelated functional areas of business;
- the use of analytical skills, critical thinking skills, and technology to solve contemporary business problems;
- an understanding of the impact of diversity and global and ethical perspectives in business; and
- effective teamwork and communication skills.

Students interested in the MBA program should call the Associate Dean for Graduate Business Programs at (501) 569-3356 or email mbaadvising@ualr.edu.

The **Concurrent MBA Programs (MBA-JD, MBA-PharmD, and MBA-MD)** allow students to concurrently complete the requirements of their primary professional program (JD, PharmD or MD) and the MBA. Attorneys, pharmacists and medical doctors find that the business skills provided by the MBA are extremely useful in their professional practices. Students in these
concurrent programs can count two courses from their primary program as MBA electives, and two courses from the MBA program are allowed as electives in their primary program. Law students interested in the MBA-JD should contact the associate dean of the Law School. Pharmacy students interested in the concurrent MBA-PharmD program should contact the program coordinator at (501) 686-6498 or email mbaadvising@ualr.edu. Medical students interested in the concurrent MBA-MD program should contact the program coordinator at (501) 686-8499 or email mbaadvising@ualr.edu.

The **Master of Science in Business Information Systems (M.S. in BIS)** is designed to integrate knowledge of information technology (IT) and the functional areas of business with emphasis on strategic IT applications and the development of project management, team, and communication competencies vital for IT managers. The program can be customized to meet varying career goals for those with or without previous technology or business course work. The goal of the program is to position graduates for advancement in the information systems field. Students interested in the MS in BIS program should contact the Chair of the Department of Business Information Systems at (501) 569-8854.

The **Graduate Certificate in Management (MGMT-GC)** is a 12-credit program designed to develop conceptual, interpersonal, and practical problem-solving skills that apply to the management of for-profit, non-profit, and governmental organizations. Students in this program will learn to demonstrate the ability to apply relevant managerial models and theories/approaches in situational analysis, an understanding of the principles of human resources management, and an ability to apply the concepts underlying effective interpersonal relations and group/team leadership skills. Students interested in the certificate program should contact the Associate Dean for Graduate Business Programs at (501) 569-3356 or email mbaadvising@ualr.edu.

The **Graduate Certificate in Business Information Systems (BINS-GC)** is a 12-credit program designed to provide a focused collection of course work in business information systems, providing students pertinent knowledge and skills necessary to enter into or progress their careers in the information systems field. The program is designed for post-baccalaureate students and working professionals who are interested in enhancing their current technical and managerial skills for career advancement or preparation for entering a master's program. Course work completed for the certificate may be applied to the Master of Science degree in BIS. Students interested in this certificate program should contact the Chair of the Department of Business Information Systems at (501) 569-8854.

The **Graduate Certificate in Business Analytics (BUS-A-GC)** is a 15-credit program designed to provide students who have technical undergraduate degrees with skill development in the high-demand field of data analytics. Program requirements include courses from both the Department of Business Information Systems and the Department of Information Science. The program focuses on competency development related to the following areas:

- Information Technology- understand structure, transmission, and manipulation of business data
- Data Analysis - use analytics tools and techniques in the big data environment
- Decision Making - apply analytics-based knowledge in a business context

A list of courses available within the College of Business can be found here.

General Policies and Guidelines

Application Deadlines for Graduate Business Programs

Completed applications with all required documentation must be received by the College of Business by the following deadlines:

- Summer Semester – April 15th
- Fall Semester – July 15th
- Spring Semester – December 10th

Prospective students are encouraged to submit their online application form and other documents well in advance of stated deadlines. (See ualr.edu/gradschool for application information.) Students may enter the graduate certificates, MBA, or M.S. in BIS program in any semester.

International Students

International students must present a score of 550 or more on the paper-based Test of English as a Foreign Language (TOEFL), 213 or more on the computer-based version, or 79 or more on the Internet version. Alternatively, international students may present a score of 6.5 or higher on the International English Language Testing System (IELTS).

Advising

Students entering graduate business programs should meet with their graduate program coordinator to discuss program requirements, course sequencing and program policies. Each semester, students must have their advising flags cleared prior to registering for the next term. To clear this advising flag, graduate students should contact their advisor. If you contact your advisor via email include your name, ID#, and a list of the courses you plan to take the next semester.

Electives

Students can count only one directed independent study course as an elective. No graduate business program currently requires a thesis for graduation. Students planning to enter a doctoral program are encouraged to enroll in an independent study course to acquire experience in academic research techniques.

While electives are generally graduate business courses, graduate business students may take up
to six elective hours in other UALR graduate programs. Approval of your advisor is required for electives taken outside the COB. Foundation courses may not be taken as electives. Courses eligible for credit as electives are so designated in the course description.

Students simultaneously enrolled in the MBA and a certificate must meet the admission standards for both the MBA and certificate program.

Transfer Credits

A maximum of six hours of course work may be transferred from other AACSB accredited programs to satisfy the course requirements in the MBA, or M.S. in BIS. Transfer credit must be no more than five years old and must have a letter grade of B or greater. Transfer credits cannot be used to waive program requirements for the Graduate Certificate programs.

Enrolling in Concurrent Programs

Applicants for the concurrent MBA-JD, MBA- PharmD, or MBA-MD programs must meet admission requirements for both programs. Once admitted to both programs, a student enters the joint program by filing a Declaration of Intent to Pursue a Concurrent Degree form. A student currently enrolled in one program may enter the concurrent program by obtaining admission to the other program and by filing the form referred to above. A student who has already completed one of the degrees in a concurrent program cannot enroll as a concurrent student. Concurrent enrollment in a COB Graduate Certificate program and the MBA program is permitted. Courses taken in fulfillment of the Graduate Certificate can be used as MBA electives. Concurrent MBA-Certificate students must meet the admission standards for both the MBA and certificate program.

Reenrolling in Graduate Business Programs

Former graduate business students, those students who have already graduated or who have become inactive, must reapply and meet current admission standards before returning for further graduate business studies. UALR COB graduates returning for a second master's degree must complete at least 30 additional credits to receive a second degree.

Transient Students

Students admitted to the Graduate School in transient status may enroll for a maximum of six semester hours for transfer back to his or her original institution. To be enrolled with transient status, students must meet UALR admission standards and provide a letter of good standing from their current school.

Undergraduate Students in Graduate Business Courses
UALR seniors who are within 15 semester hours of completing baccalaureate degrees with a 3.0 GPA or higher and have a GMAT of at least 480 may enroll for a maximum of 6 semester hours of graduate business courses during their last undergraduate semester. However, if these graduate business courses are applied towards undergraduate degree requirements they cannot also be counted towards graduate degree requirements.

**Graduation Requirements**

Students must complete all required courses and earn an overall GPA of 3.0 or higher to graduate. Students failing to earn a 3.0 GPA after completing all required courses may enroll in a maximum of six additional semester hours to attain the required 3.0 GPA. A grade below a C provides no credit toward graduation, and the course must be repeated. Students must complete an Application for Graduation early in their final term. This application is available in BOSS.

**Time Limit**

All degree requirements must be completed within six years of admission to the program.

**Financial Assistance**

A limited number of graduate assistantships are offered each year to qualified students. Graduate assistants are expected to work 20 hours per week in the College. Duties may include assisting with faculty research projects and/or providing support services in the Arkansas Small Business and Technology Development Center, the Institute for Economic Advancement, the COB computer labs, or the online programs. Applicants must be regularly admitted to a graduate program, maintain at least a 3.0 overall GPA, and enroll for at least nine graduate hours each semester. Applications for graduate assistantships must be submitted to the Associate Dean for Graduate Business Programs by April 1.

**Definitions:** An “attempt” is defined as either a full-term enrollment with a letter grade or Incomplete being posted or a partial-term enrollment that lasts beyond the drop deadline but ends with a withdrawal and a W being posted to the transcript. A “successful completion” is defined as a grade of B or greater in the course. If a student drops, withdraws, or requests an incomplete this will not be considered a successful completion.
Reynolds Center, Suite 304, (501) 569-3356

Master of Business Administration (MBA)

Admissions Requirements

UALR MBA candidates must possess strong academic preparation and strong aptitude for graduate study in business. Consequently, the admission requirements embody evidence of both prior academic achievement (GPA) and probability of successful performance in the MBA program (GMAT or GRE score).

Students seeking admission to the MBA program must meet one of the following criteria:

- \((200 \times \text{cumulative GPA}) + \text{GMAT score (or converted GRE score)} \geq 1020, \text{ or}\)
- \((200 \times \text{GPA from last 60 undergraduate hours}) + \text{GMAT score (or converted GRE score)} \geq 1080\)

Regardless of the total points, the minimum acceptable GPA is 2.5 and the minimum acceptable GMAT score is 420, and the minimum acceptable GRE score is equivalent to the minimum GRE score when converted. GMAT or GRE scores used for admission must be taken within the past five years.

**Waiver of GMAT Requirement:** The MBA program coordinator may waive the GMAT requirement for applicants who

1. Hold a graduate degree or who are currently enrolled in a graduate or professional degree program with equivalent admission standards, or
2. Have at least a 3.25 GPA from an AACSB-accredited business school (including UALR), or
3. Can substantiate through written documentation that the combination of their academic and professional accomplishments makes them highly prepared for success in a rigorous graduate program. This may include holding analytically oriented professional or technical certification (e.g., CPA, PE, CFA, PMI, CFP, etc.), current job responsibilities that substantiate preparedness and analytical skills (e.g., P&L responsibilities, data analysis, etc.), 3.5 or higher GPA from a highly reputable non-business program, or
4. Have at least a 2.5 GPA in a degree as described in 2 or 3 above combined with a minimum of five years post-baccalaureate professional work experience showing managerial duties and promotion to increasing levels of responsibility.
All GMAT waivers will be evaluated on a case-by-case basis. To be considered for a GMAT waiver, candidates must first begin an application. A current resume will be required for GMAT waiver eligibility and unofficial transcripts may be requested. A brief, one page maximum, written request outlining why a GMAT waiver should be granted is required. The Graduate Committee reserves the right to interview GMAT waiver candidates at its discretion.

**Conditional Admission**

MBA applicants who do not meet the criteria for full admission are encouraged to apply and may be admitted conditionally. Decisions concerning conditional admissions will be made by the College of Business Graduate Committee (or a subcommittee thereof.) Factors considered in requests for conditional admission will include the following: scores on other standardized exams, grades in the undergraduate major, or other pertinent data that indicate the applicant will perform satisfactorily in the MBA program. Students conditionally admitted to the MBA program must achieve a 3.25 GPA in the first 12 hours of study, or they will be dismissed.

**Program Requirements**

The MBA program consists of a minimum of 32 credit hours (14 core courses) and a maximum of 36 credit hours (14 core courses plus three foundation courses and one career management course). Students who can demonstrate background preparation in accounting, economics, and finance through passage of online assessments in these areas will not be required to take the foundation course(s) (three courses, one credit hour each). Students are not required to take the assessments before entering the program; instead, students may choose to take a one credit hour course in any or all three areas. However, students must be able to earn a passing score on the assessment in an area before registering for the core course in that area. (For example, students must pass the accounting assessment before registering for ACCT 7304 even if they choose to take ACCT 7100).

All students must demonstrate competency in the use of Excel spreadsheets through the passage of an online assessment. Students with less than three years of professional experience (as determined by the associate dean for graduate studies) will be required to take a one credit hour course on career management. Students with three or more years of professional experience may choose to take the career management course.

Information on the assessments and self-paced study modules to prepare for the assessments may be obtained from the Graduate Business office (501-569-3356).

**Foundation Courses (3 credit hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 7100 Accounting Methods &amp; Reports</td>
<td>1 credit hour</td>
</tr>
</tbody>
</table>
ECON 7100 Foundations of Business 1 credit hour
FINC 7100 Finance Fundamentals 1 credit hour

Note: Any or all foundation courses will be waived if the student passes assessments in the area(s).

Core Courses (33 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 7304 Accounting for Managers</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>BSAD 7100 Managing Your Career</td>
<td>1 credit hour</td>
</tr>
<tr>
<td>ECON 7200 Applied Problem Solving</td>
<td>2 credit hours</td>
</tr>
<tr>
<td>ECON 7313 Managerial Economics</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>FINC 7311 Applied Corporate Finance</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>MGMT 7101 Developing Leadership Skills I</td>
<td>1 credit hour</td>
</tr>
<tr>
<td>MGMT 7102 Developing Leadership Skills II</td>
<td>1 credit hour</td>
</tr>
<tr>
<td>MGMT 7180 Strategy for Competitive Advantage I</td>
<td>1 credit hour</td>
</tr>
<tr>
<td>MGMT 7210 Operations and Supply Chain Management</td>
<td>2 credit hours</td>
</tr>
<tr>
<td>MGMT 7280 Strategy for Competitive Advantage II</td>
<td>2 credit hours</td>
</tr>
<tr>
<td>BINS 7250 Strategic Management of Information Systems</td>
<td>2 credit hours</td>
</tr>
<tr>
<td>MGMT 7310 Management of Human Capital</td>
<td>3 credit hours</td>
</tr>
<tr>
<td>MKTG 7311 Marketing for Profit &amp; Growth</td>
<td>3 credit hours</td>
</tr>
</tbody>
</table>

Electives

Note: BSAD 7100 will be waived for students with three or more years of professional experience. This course is optional for students with three or more years of professional experience.
Graduation Requirements:

- Students must complete all required courses and earn an overall GPA of 3.0 or higher to graduate.
- Students failing to earn a 3.0 GPA after completing all required courses may enroll in a maximum of six additional semester hours to attain the required 3.0 GPA. A grade below a C provides no credit toward graduation, and the course must be repeated.
- All degree requirements must be completed within six years of admission to the program.

No graduate business program currently requires a thesis for graduation. Students planning to enter a doctoral program are encouraged to enroll in a directed research course to acquire experience in academic research techniques.

Concurrent MBA Programs

Concurrent MBA – JD

I. Curricular Requirements for Concurrent MBA – JD

A student at the University of Arkansas at Little Rock may pursue the JD and MBA degrees under a concurrent degree program, which allows cross-credit for certain specified courses. The concurrent degree program offers a potential savings of 12 credit hours in the total credit hours otherwise required for both degrees. A student in the concurrent degree program must complete all requirements for the JD degree, as specified by the School of Law, and all requirements for the MBA as specified by the College of Business.

The concurrent degree program is subject to the following conditions:

1. To receive cross-credit, credit must be earned for the course in the degree program in which the course is offered. For instance, core courses in the MBA program listed in Number 4 below will receive credit in the JD program only if the student receives credit for the courses in the MBA program.
2. In the MBA program, a student may receive elective credits for six semester hours of approved courses in the JD program, completed with a minimum grade of C. A list of the approved JD courses is set out in Section II.
3. In the JD program, a student may receive elective credits for six semester hours of approved courses in the MBA program, completed with a minimum grade of C. A list of courses is set out in Section III.
4. In the JD program, a student must complete the following courses in addition to those otherwise required for the JD degree: Business Associations, Commercial Paper, Sales Transactions, Federal Income Taxation, and at least one advanced tax course (e.g., Advanced Taxation, Corporate Taxation, Deferred Compensation, Estate and Gift Tax, Estate Planning, Partnership Taxation, State & Local Taxation, Tax Clinic, Tax Policy, or Business
Planning). The student may choose up to six credit hours from the above courses for credit in the MBA program, subject to the conditions set out in number 3 above.

II. Administrative Policies and Procedures for Concurrent MBA – JD:

A student enrolled in the concurrent degree program is subject to all administrative policies and procedures of each program during the period of enrollment in the concurrent degree program. In addition, the following policies and procedures apply to students in the concurrent degree program:

1. A student must obtain admission separately to the JD program and the MBA program. Once admitted to both programs, a student enters the concurrent degree program by filing a Declaration of Intent to Pursue Concurrent Degrees.
2. A student currently enrolled in one program may enter the concurrent degree program by obtaining admission to the other program and filing the Declaration of Intent to Pursue Concurrent Degrees. Credit toward the JD degree shall only be given for course work taken after the student has matriculated in the law school.
3. A student is not enrolled in the concurrent degree program until copies of the Declaration of Intent to Pursue Concurrent Degrees are filed with the Registrar of the School of Law and with the Associate Dean for Graduate Studies of the College of Business.
4. A student who has completed one degree may not thereafter enter the concurrent degree program to complete another degree.
5. A student who enters the concurrent degree program must select which program to pursue first and notify the other program in order that enrollment may be deferred. Concurrent degree enrollment in classes in both programs is normally permitted only when a student is within six credit hours of completion of the first degree. Earlier concurrent degree enrollment requires the written permission of the Associate Dean for Academic Affairs of the School of Law and the Associate Dean for Graduate Studies of the College of Business.
6. The total credit hour load in both programs for concurrently enrolled students shall not exceed the normal maximum load in either program without the approval of the Associate Dean for Academic Affairs of the School of Law and the Associate Dean for Graduate Studies of the College of Business. Under no circumstances will concurrent degree enrollment be permitted during the first year of the JD program.
7. Grade point averages and class standings in each program are determined without consideration of the six hours of credits accepted from the other program.
8. Except as modified by Sections I and II of this statement of the concurrent degree program for JD and MBA degrees, a student must comply with all degree requirements established for each program. For instance, the School of Law has a requirement that all degree requirements be completed not more than six years after enrollment at the School of Law. A student enrolled in the concurrent degree program must earn any credit hours in the MBA program to be applied to the JD degree within six years of enrolling in the School of Law.

III. MBA Courses approved for JD Program

The following courses offered by the College of Business may be used for elective credit in the JD
program: ACCT 7302, ACCT 7304, ACCT 7305, ACCT 7360, ACCT 7365, ACCT 5366 (formerly ACCT 7366), ACCT 5323 (formerly ACCT 7367), ECON 7300, ECON 7313, FINC 7301, FINC 7311, FINC 7320, FINC 7330, FINC 7340, FINC 7350, MGMT 7340, and MGMT 7341.

Concurrent COB – UAMS Programs (MBA- PharmD or MBA-MD)

Students enrolling in either the MBA-PharmD or MBA-MD programs will be permitted to count two relevant courses from their UAMS programs as MBA electives. Likewise, two MBA courses will be counted towards their PharmD or MD elective requirements.
Admission Requirements

Regular Admission

M.S. in BIS candidates must possess strong academic preparation and strong aptitude for graduate study in business. Consequently, the admission requirements embody evidence of both prior academic achievement (GPA) and probability of successful performance in the BIS program (GMAT or GRE score). Students seeking automatic admission to the M.S. in BIS program must meet one of the following criteria:

1. \((200 \times \text{cumulative GPA}) + \text{GMAT score (or converted GRE score)} \geq 1020\), OR
2. \((200 \times \text{GPA from last 60 undergraduate hours}) + \text{GMAT score (or converted GRE score)} \geq 1080\)

Regardless of total points, the minimum acceptable GPA is 2.5, the minimum acceptable GMAT score is 420, and the minimum acceptable GRE score is equivalent to the minimum GMAT score when converted. GMAT or GRE scores used for admission must be taken within the past five years.

Waiver of GMAT or GRE Requirement:

The M.S. in BIS coordinator may waive the GMAT requirement for applicants who

1. Hold a graduate degree or who are currently enrolled in a graduate or professional degree program with equivalent admission standards, OR
2. Have at least a 3.25 GPA from an AACSB-accredited business school (including UALR), OR
3. Can substantiate through written documentation that the combination of their academic and professional accomplishment makes them highly prepared for success in a rigorous graduate program. This may include holding analytically oriented professional or technical certification (i.e., CCDA, CISM, CISSP, MSCA, MSCE, VCP, etc.), current job responsibilities that substantiate preparedness and analytical skills (e.g., data analytics, strategic analysis, etc.), 3.5 or higher GPA from a highly reputable non-business program, OR
4. Have at least a 2.5 GPA in a degree as described in 2 or 3 above combined with a minimum of 5 years of postbaccalaureate, professional work experience showing managerial duties and
promotion to increasing levels of responsibility.

All GMAT waivers will be evaluated on a case-by-case basis. To be considered for a GMAT waiver, candidates must first begin an application. A current resume will be required for GMAT waiver eligibility and unofficial transcripts may be requested. A brief, one page maximum, written request outlining why a GMAT waiver should be granted is required. The BIS graduate faculty reserve the right to interview GMAT waiver candidates at its discretion.

**Conditional Admission**

M.S. in BIS applicants who do not meet the criteria for full admission are encouraged to apply and may be admitted conditionally. Decisions concerning conditional admission will be made by the BIS graduate faculty (or a subcommittee thereof). Factors considered in requests for conditional admission will include the following: scores on other standardized exams, grades in the undergraduate major, or other pertinent data that indicate the applicant will perform satisfactorily in the MS in BIS program. Students conditionally admitted to the MS in BIS program must achieve a 3.25 GPA in the first 12 hours of study, or they will be dismissed.

**Program Requirements**

Competency in Object-Oriented programming (BINS 4312 or equivalent), which can be met with prior course work or experience.

Foundation Courses (four graduate credits which may be waived with prior undergraduate coursework)

ACCT 7100 Accounting Methods and Reports  
BINS 7303 Systems Development and Database Design

Undergraduate Equivalents

ACCT 2310 Principles of Accounting I  
AND  
ACCT 2330 Principles of Accounting II  
BINS 3307 Systems Dev Methodologies  
AND  
BINS 4350 Business Data Mgmt Systems

Required Core Courses (33 graduate credits)

ACCT 7330 Managerial Accounting for Information Systems Specialists  
BINS 7304 Integrated Business Applications for Decision Making  
BINS 7305 Advanced Data Management Systems
BINS 7307 Systems Analysis and Design Methods
BINS 7308 Advanced Business Communications
BINS 7309 Cloud-based Business Intelligence
MGMT 7312 Team Development
BINS 7350 Information Systems Management
BINS 7353 Project Management (Capstone Course to be taken at the end of program.)

Electives (6 credits)

6 hours (with approval of program coordinator)
Graduate Certificate Programs

Graduate Certificate Programs

Business Analytics, Management, and Business Information Systems Graduate Certificates

Admission Requirements

Applicants must possess a bachelor’s degree with either an overall GPA of at least 2.8, a 3.0 in the last 60 hours, or a 3.2 in the last 30 hours.

Exceptions:

- Passage of select rigorous professional certification exams such as the Project Management Professional, MCSE, and MCSD exams. In this case, a résumé and personal interview required. Decision of the Management or Business Information Systems Department Admission Committee and/or program coordinator is final.
- At least 5 years of substantial relevant professional experience. In this case, a résumé and personal interview required. Decision of the Management or Business Information Systems Department Admission Committee and/or program coordinator is final.

Graduate Certificate in Business Analytics

Program Requirements

The graduate certificate in Business Analytics requires 15 hours.

Required Core Courses (nine hours)

BINS 5351 Data Analysis and Reporting
BINS 7304 Business Applications for Decision Making
IFSC 5345 Information Visualization

Elective Courses

BINS 5350 Business Database Management Systems
or BINS 7303 Systems Development and Database Design*
BINS 7309 (New applications course using Azure platform)
IFSC 5325 Data Mining Concepts and Techniques
IFSC 5360 Social Computing
IFSC 7360 Data and Privacy Protection
*If student has no undergraduate database course

Graduate Certificate in Management

Program Requirements
The Graduate Certificate in Management consists of 12 hours of coursework from the following courses:

Required Core Courses (6 hours)
MGMT 7310 Management of Human Capital
MGMT 7341 Strategic Human Resource Management

Elective Courses (6 hours)
BINS 7308 Advanced Business Communication
MGMT 7311 Entrepreneurship and Small Enterprise Management
MGMT 7312 Team Development
MGMT 7313 Commercializing Innovations
MGMT 7335 International Management
MGMT 7371 Production/Operations Management
MGMT 7398 Seminar in Special Topics
One 5000-level course

Graduate Certificate in Business Information Systems

Program Requirements
The graduate certificate in Business Information Systems consists of 12 hours of coursework in
the following courses:

Two Courses from the Following Technical Courses (6 hours)

BINS 5310 Network Technologies
BINS 5351 Data Analysis and Reporting
BINS 7303 Systems Development and Database Design
or BINS 5350 Database Management Systems
BINS 7304 Integrated Business Applications for Decision Making
BINS 7305 Advanced Database Management Systems
BINS 7307 Systems Analysis and Design Methods

Two Courses from the Following Managerial Courses (6 hours)

BINS 7308 Advanced Business Communication
MGMT 7310 Management of Human Capital
or MGMT 7313 Commercializing Innovations
MGMT 7312 Team Development
MGMT 7350 Information Systems Management
or MGMT 7101 Developing Leadership Skills 1
AND BINS 7250 Strategic Management of Information Systems and Technology
BINS 7352 Emerging Technologies and Strategic Issues
Courses in Accounting

**ACCT 5381 Legal, Regulatory and Ethical Environment for Accountants**
Prerequisite: MKTG 2380 – Legal Environment of Business (or equivalent) with a grade of C or greater. A comprehensive overview of business law and ethics topics, such as the Uniform Commercial Code, accountant’s liability, government regulation of business, agency, contracts, debtor-creditor relationships, real property, insurance, and other topics covered in the CPA exam. This course is open to all graduate business students, but is not open to students with credit for ACCT 4381.

**ACCT 7100 Accounting Methods and Reports**
Uses of accounting data are taught in this course. The topics covered include financial statements, mechanics of recording, theory, working capital, property and plant, long term debt, owner’s equity, costing of products, control of costs, and non-routine decisions. This is a Foundation-Level course that cannot be used as an elective in any graduate business program. Open only to students in the MBA program and the MS in BIS program.

**ACCT 7302 Accounting Methods and Reports**
Uses of accounting data are taught in this course. The topics covered include financial statements, mechanics of recording, theory, working capital, property and plant, long term debt, owners; equity, costing of products, control of costs, and nonroutine decisions. The curriculum includes case studies to illustrate application of accounting principles and procedures to the decision process. This is a Foundation-Level course that cannot be used as an elective in any graduate business program. Open only to students in the MBA program and the MS in BIS program.

**ACCT 7304 Accounting for Managerial Decision-Making**
Prerequisite: Principles of Accounting I and II (ACCT 2310 and 2330) or ACCT 7100 and passing score on accounting assessment. Course Description: This course provides an overview of financial and managerial accounting as well as an introduction to tax planning. The emphasis will be on how various events and transactions in the life cycle of a business affect the basic accounting equation so that the manager can identify the important accounting issues. The course will look at choice of entity, accrual accounting issues, financial statement analysis and differences between U.S. Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS). In regard to tax planning, this course is intended to fill the gap between a manager well-trained in finance but unfamiliar with taxes and the tax experts on which the manager will rely. This course will examine the structure of tax codes (state and federal) and how taxes influence the finance decisions the manager will be expected to make (e.g. investments, choice of entity, capital structure, like-kind exchanges, mergers and
acquisitions, timing of transactions, etc.).

**ACCT 7305 Analysis of Financial Statements**
Prerequisite: ACCT 7304 with a grade of B or greater. User-oriented analysis of the operating performance of an organization based upon accounting information and related financial statements; emphasizes comparative profitability, liquidity, and operating performance measures; examines statistical techniques and electronic spreadsheets used to analyze and manipulate data. Open to students in the MBA program. This course cannot be applied to the Graduate Certificates in Accountancy or Taxation, the MACC.

**ACCT 7320 Tax Planning for Business Decisions**
Prerequisites: ACCT 3321 with a grade of C or greater. Impact of federal tax laws, regulations on a variety of business decision areas; opportunities for tax planning in those areas. This course is open to all graduate business students.

**ACCT 7330 Managerial Accounting for Information Systems Specialists**
Principles of Accounting I and II (ACCT 2310 and 2330) or ACCT 7100 and passing score on accounting assessment. Application and use of accounting information for managerial decision making in the information technology environment; major topics include cost accumulation systems, cost management systems, planning and control systems, and the use of accounting information in decision making. This course cannot be applied against the graduate programs in taxation or accountancy.

**ACCT 7340 International Accounting**
Prerequisites: ACCT 3311 and ACCT 3312, each with a grade of C or greater. This course examines international financial reporting developments, procedures, and standards (IFRS) with an emphasis on financial statement interpretation and analysis. Specific attention is given to the financial reporting requirements of multinational enterprises operating in a global business environment. Open only to MBA students and students in the graduate accounting and taxation programs.

**ACCT 7355 Research in Federal Taxation**
Prerequisite: ACCT 3321 – Federal Taxation with a grade of C or greater. Methods and tools of tax research as applied to both closed fact and controllable fact cases. Methods of locating and assessing relevant authority on specific tax questions is emphasized. This course is open to all graduate business students, but it cannot be taken by students with credit for ACCT 4323, ACCT 5323, or ACCT 7367.

**ACCT 7356 Federal Corporate Taxation**
Prerequisite: ACCT 3321 (or equivalent); and ACCT 4323 each with a grade of C or greater or ACCT 7355 with a grade of B or greater. Concurrent enrollment in ACCT 7355 is permitted. Study of federal income taxation provisions affecting the formation, operation, liquidation, acquisition, and reorganization of Subchapter C corporations. There will be an emphasis on research and tax planning. This course is open to all graduate students, but can not be taken by
students who have taken ACCT 4322.

**ACCT 7360 Taxation of Pass-Through Entities**
Prerequisite: ACCT 7355 with a grade of B or greater or ACCT 4323 with a grade of C or greater. Concurrent enrollment in ACCT 7355 is permitted. Study of small business entities, emphasis on partnerships, limited liability companies, and S corporations; includes choice, formation, and operation of above and distributions, sales, and exchanges of ownership in interests, and transfers by death. Emphasis on research and tax planning. Open only to MBA students and students in the graduate accounting and taxation programs.

**ACCT 7361 Advanced Topics in Auditing**
Prerequisites: ACCT 3341, 4351, or their equivalent, each with a grade of C or greater. The expansion of the auditing function, including internal auditing, operational auditing, auditing EDP systems, and statistical sampling. SEC requirements, legal and ethical responsibilities, comprehensive review of auditing, and application of accounting research skills. This course is open to MBA students and students in the graduate accounting and taxation programs. It is not open to students with credit for ACCT 5352.

**ACCT 7362 Advanced Topics in Accounting Information Systems**
Prerequisite: ACCT 3341 and 4351 (or equivalents) each with a grade of C or greater. Accounting systems in a database environment; structured systems analysis and other approaches to systems analysis and design; current developments in computerized systems technology; risks and controls in computerized information systems; application of accounting research skills. Open only to MBA students and to students enrolled in graduate accounting and taxation programs.

**ACCT 7363 Accounting Theory and Research**
Prerequisite: ACCT 4351 (or equivalent) with a C or greater. Undergraduate degree in accounting or equivalent. Investigation of the development of accounting theory. Focuses on the nature and development of accounting theory and its relation to the standard setting process. The relationship of accounting theory to the resolution of current issues is examined. Emphasis on accounting research. This course is open to students in all graduate business programs.

**ACCT 7364 Advanced Topics in Managerial Accounting**
Prerequisite: ACCT 3330 and 3341 (or equivalents) with a grade of C or greater. Continuation of managerial accounting. Use of accounting information for planning and control, profit planning and control, cost/volume/profit and incremental analysis, capital budgeting, responsibility reporting and performance evaluation, transfer pricing, quantitative models, and decision simulation. Application of accounting research skills. Open only to MBA students and students in the graduate accounting and taxation programs.

**ACCT 7365 State and Local Taxation**
Prerequisite: ACCT 7355 with a grade of B or greater or ACCT 4323 with a grade of C or greater. Concurrent enrollment in ACCT 7355 is permitted. The constitutional, statutory, regulatory, and judicial principles affecting state and local taxation of business transactions, with emphasis on
Arkansas taxation. Emphasis on research and tax planning. Open only to MBA students and students in the graduate accounting and taxation programs.

**ACCT 7368 Advanced Governmental and Not-for-Profit Accounting**  
Prerequisite: ACCT 3361 with a grade of C or greater. This course involves the advanced study of accountability, financial reporting and performance measurement in government and not-for-profit organizations. Accounting principles, rules and procedures are also examined to develop an understanding of the day to day operating activities of government and not-for-profit organizations. Open only to MBA students and students in graduate accounting and taxation programs.

**ACCT 7369 International Taxation**  
Prerequisite: 7355 with a B or greater or ACCT 4323 with a C or greater, and ACCT 4322 with a C or greater, or ACCT 7356 with a B or greater. Concurrent enrollment in ACCT 7355 is permitted. U.S. federal taxation of international transactions, e.g., “inbound” transactions (affecting nonresident aliens and foreign corporations) and “outbound” transactions (affecting U.S. persons, business, and investment activities outside the U.S.). Topics include jurisdiction, source of income rules, residency tests, transfer pricing, and tax treaties. In connection with “inbound” transactions, the course will address U.S. taxation of investments, business, U.S. real property investments; and branch profits tax. As to “outbound” transactions, the course will include the foreign tax credit; controlled foreign corporations, foreign currency issues; and other cross-border transactions. Open to MBA students and students in graduate accounting and taxation programs.

**ACCT 7370 Estate and Gift Taxation**  
Prerequisite: ACCT 7355 with a grade of B or greater or ACCT 4323 with a grade of C or greater. Concurrent enrollment in ACCT 7355 is permitted. Federal tax implications of wealth transfers as it relates to estate planning, including a review of the alternative ways to hold and to transfer property, during life, at death, or after death; the use of legal devices; acceptance and rejection of gifts; property valuation; generation skipping tax; and the estate tax return. Open only to MBA students and students in the graduate accounting and taxation programs.

**ACCT 7371 Federal Tax Accounting**  
Prerequisite: ACCT 7367 or 5323 or 7355 with a grade of B or greater or ACCT 4323 with a grade of C or greater. Concurrent enrollment in ACCT 7355 is permitted. Adoption of changes in accounting periods and methods; income recognition and deduction allowances in connection with cash and accrual methods, interest; OID, time value of money, deferred payments, installment sales, prepaid and contested items, reversals, capitalization, amortization, and depreciation; inventory accounting; accounting for long term contracts; carryovers; claim of right; tax benefits; conformity between tax and financial reporting. Open only to MBA students and students in the graduate accounting and taxation programs.

**ACCT 7372 Federal Tax Practice and Procedure**  
Prerequisite: ACCT 7367 or 5323 or 7355 with a grade of B or greater or ACCT 4323 with a
grade of C or greater. Concurrent enrollment in ACCT 7355 is allowed. To gain a general knowledge about the IRS’s organization and the procedures used to administer the Internal Revenue Code, including the rules of practice before the IRS, ethical considerations, statute of limitations, examinations, penalties, appeals, assessments, collections, claims for refund, and some of the basic rules concerning criminal tax fraud. Open only to MBA students and students in graduate accounting and taxation programs.

**ACCT 7373 Forensic Acct & Fraud Audit**
Prerequisite: ACCT 4351 or equivalent. Understanding the types of fraud taking place in today’s business environment; recognition of more than 800 red flags, characteristics and risk factors of occupational fraud; and discussion of techniques needed to build effective fraud prevention and detection measures into an audit plan.

**ACCT 7199, 7299, & 7399 Independent Study**
Prerequisites: A GPA of at least 3.0, at least 12 graduate credits, and consent of department. Intensive research under faculty supervision on approved topic in an area not covered in depth through regularly scheduled courses; research paper required. Open only to students in graduate accounting and taxation programs.

**ACCT 8300 Seminar in Current Topics**
Prerequisite: ACCT 4351 with a grade of C or greater, ACCT 5323 with a grade of B or greater, or consent of Department Chair. Topics of current importance and interest in accounting. Open to MBA students and to students in the graduate accounting and taxation programs.

Courses in Business Information Systems

**BINS 5310 Network Technologies Local**
MBA or MS in BIS Elective. A study of the role of telecommunications in information resource management, with emphasis on business applications in a network environment. Principles of network and installation, system component selection, administration, security, and control. This course is not open to students with credit for MGMT 4310 or BINS 4310.

**BINS 5350 Business Database Management Systems**
MBA Elective, MS in BIS prerequisite course. Does not apply toward MS in BIS Core requirements. Addresses the concepts and principles underlying the design and application of relational graphics based data modeling, relational algebra, the database language SQL, database design, and normalization theory. Projects, which typically are implemented using a current commercial database management system software, are assigned to reinforce most of the concepts taught in the course. This course is not open to students with credit for MGMT 4350 or BINS 4350.
**BINS 5351 Data Analysis and Reporting**
Prerequisite: C or better in MGMT/BINS 4350/5350 or equivalent or consent of instructor. Students will gain practical experience in using advanced database techniques and data visualization, data warehousing, reporting, and other Business Intelligence (BI) tools. Contemporary BI tools and technologies will be used to create intelligent solutions to realistic business problems. Students with credit for BINS 4351 may not take BINS 5351 for additional credit.

**BINS 7250 Strategic Mgmt of IS & Tech**
MBA core course. Prerequisite: ACCT 7304, ECON 7313 and MGMT 7180. Focus on strategic and operational roles of information systems and technology (IS) and other information resources, including their applications, value-adding processes, sourcing, governance, organizational and strategic alignment as well as limitations. Management of the IS asset portfolio using a risk/reward framework considering life cycle, obsolescence, innovation, and strategic impact.

**BINS 7303 Systems Development and Database Design**
M.S. in BIS Foundation core course or MBA elective. The course is a survey of information system development. It will provide students with non-IS backgrounds with foundation knowledge and skills in information systems development. The course overviews the process of system development using SDLC (system development life cycles) with an emphasis on database development. Three credit hours.

**BINS 7304 Business Applications for Decision Making**
M.S. in BIS core course or MBA elective. An exploration of the integration of business application technologies and procedures, such as cloud computing, business intelligence, mobile applications, and security being leveraged by corporations.

**BINS 7305 Advanced Database Management Systems**
M.S. in BIS Core Course or MBA Elective. Prerequisites: MGMT 4350/5350, BINS 4350/5350, or equivalent. Advanced concepts in database management, expanding from the relational data model to the multidimensional model, object-relational techniques, and web accessed data.

**BINS 7307 Systems Analysis and Design Methods**
M.S. in BIS core course or MBA elective. Prerequisite: MGMT 3307, BINS 3307, or equivalent. Application of system analysis and design methodology with emphasis on Object-Oriented (OO) methodologies. Includes basic concepts, modeling techniques, and tools for systems analysis and design.

**BINS 7309 Cloud-Based Business Intelligence**
M.S. in BIS core course or MBA elective. Students will experience a hands-on exploration of cloud-based business intelligence tools, technologies, and procedures being leveraged by corporations.

**BINS 7315 E-Commerce Technologies**
MBA or M.S. in BIS Elective. An overview of e-commerce technologies, including analysis of e-commerce infrastructure, technology, and managerial and implementation strategies. Focus on web development.

**BINS 7350 Information Systems Management**
M.S. in BIS core course. The strategic perspective for aligning competitive strategy, core competencies, and information systems. Development, implementation, and management of information systems that support the operational, administrative, and strategic needs of the organization, its business units, and individual employees.

**BINS 7351 Management Information Systems: Theory and Application**
MBA or M.S. in BIS elective. Information flow between various decision points in functional areas of a variety of organizations; develops understanding of routine information flow, how it can be made more effective and efficient in terms of handling, processing, refining, dissemination; uses executive and systems design perspectives; reviews and uses real systems in local government and business organizations.

**BINS 7352 Emerging Technologies and Strategic Issues**
MS in BIS Core Course. MBA Elective. Prerequisite: BINS 7350 or equivalent. In-depth examination of the strategic use and development of an integrated technical architecture (hardware, software, networks, and data) to serve organizational needs in a rapidly changing competitive and technological environment. Strategic use of technologies for intra- and inter-organizational systems.

**BINS 7353 Project Management**
Prerequisites: BINS 7304, 7305, 7308, 7312, 7350, and completion of or concurrent enrollment in ACCT 7330. MS in BIS Core Course. Capstone course to be taken at the end of the program. A study and application of project management techniques through the development and implementation of an application development project. Includes all stages of the project development life cycle, with focus on enterprise application integration.

**BINS 7370 Issues in Manufacturing and Operations Management**
MBA or MS in BIS Elective. Prerequisite: All Core courses. Concerns of manufacturing, service management; includes product and process design, plant capacity and location, work force development, scheduling, inventory control, product and service improvement, vendor relations; emphasis on resource and functional integration, information systems use, team solutions, global marketplace competition strategies; decision-making tools such as forecasting, queuing theory, simulation, network analysis.

**BINS 7371 Production/Operations Management**
MBA or MS in BIS Elective. Prerequisite: ECON 7320 or ECON 7313, or equivalent. A study of traditional ideas and techniques of production/operations management as well as contemporary practices and concepts being employed by businesses. In this course, the term “production” refers to the conversion of labor hours, dollars, materials, and skills (inputs) into products or services.
Courses in Business Administration

**BSAD 7100 Managing Your Career**
Course Description: MBA Core Course. Empowers students with the knowledge and tools to effectively manage their own careers. The course offers career development and placement support to help students identify their ideal career based on interests, motivational traits, personality, values, abilities, aptitudes, personal work style, and work environment preferences. Addresses career related concerns such as: exploring career options, building and leveraging a professional network, developing a personal marketing plan, job-search and transition skills, behavioral interviewing, job and company-specific research, business etiquette, and offer negotiation.

**BSAD 7395 Cooperative Education**
MBA Electives Prerequisite: all MBA foundation courses, 12 credits of MBA core courses and consent of the graduate program director. Designed to complement and extend the classroom learning experiences through the application of theories and concepts in a professional work environment. A deliverable project, designed in consultation with a faculty member, and a minimum of 200 hours with a participating employer during the semester are required.

Courses in Economics

**ECON 5350 Applied Econometrics**
Prerequisites: ECON 7320 or equivalent. This course will introduce students to the skills used in empirical research, including, but not limited to, data collection, model specification, regression analysis, violations of regression assumptions and corrections, indicator variables, linear restrictions tests, and limited dependent variable models. The course will focus on the intuition and application of econometric methods, and statistical software will be used extensively. Students will be required to complete an independent research project involving the application of regression analysis.

**ECON 7100 Foundations of Business**
This course provides the foundations necessary for students planning to take more advanced MBA-level courses. This course covers two main topics. The first topic is the market, where we learn how to predict and explain behavior in the marketplace, explain the determination of prices, quantities, and allocation of resources, and calculate and explain elasticity measures. The second topic is the firm, where we learn how to explain and describe the economic costs and profit-maximizing decision-making for a firm.

**ECON 7200 Applied Problem Solving**
Prerequisite: Passing score on Excel assessment. This course teaches students the art of recognizing business problems and opportunities, understanding the decision process and the role that statistical tools play in analyzing, summarizing, and converting data into useful information for gaining insight and making sound business decisions. Emphasis is placed on using
statistical tools and judgment to solve problems. This course prepares students with core knowledge that can be used for discipline-specific data analysis and decision making.

**ECON 7300 Economic Principles**  
MBA Foundation Course. Theory of the individual firm in the economy; utility, demand theory, elasticity; cost and price determination, income distribution; macroeconomic analysis of income, employment, prices, business fluctuations, monetary system, elements of international trade.

**ECON 7313 Economics and Global Business**  
Prerequisite: ECON 7100 or passing score on assessment. MBA Core Course or MS in BIS Elective. The use of economic analysis in managerial decision making. Microeconomic topics include information asymmetries relating to agency and adverse selection, the firm’s horizontal and vertical structure, demand theory and estimation, market structure analysis, marginal analysis, game theory, and pricing policies. Macroeconomic topics include international trade and the effect of monetary and fiscal policies on the firm’s macroeconomic environment.

**ECON 7320 Quantitative Analysis**  
MBA Foundation Course. Introductory calculus and statistics with applications in business, including topics such as differential and integral calculus, descriptive statistics, probability theory, hypothesis testing, and regression analysis.

**ECON 7322 Econometrics**  
MBA or MS in BIS Elective. Prerequisite: ECON 7321 or consent of instructor. Application of statistics, mathematics to economic problems; economic models formulation, measurement, verification, prediction.

**ECON 7324 Environmental and Resource Economics for Managers**  
MBA or MS in BIS Elective. Prerequisite: ECON 7300; permission of instructor to permit non-MBA graduate students to enroll. This course presents the theoretical and applied aspects of resource use and environmental issues that are faced by managers in modern business settings. Economic efficiency is defined and explored and employed throughout the course as a means of approaching resource and environmental problems. Case examples of pollution problems and resource misuse are introduced as a means of understanding economic efficiency.

**ECON 7330 Public Sector Economics**  
MBA or MS in BIS Elective. Prerequisite: ECON 7300 or consent of instructor. Theory of public goods, allocation techniques; welfare economics, welfare politics concepts and critique; revenue sources, equity considerations and impact; public sector budgeting; theory, concepts of fiscal federalism.

**ECON 7399 Independent Study**  
MBA or MS in BIS Elective. Prerequisites: All Foundation courses, 12 credits of Core requirements, and consent of instructor. Intensive research under faculty supervision on an approved topic in an area not covered in depth through regularly scheduled courses; research
paper required.

**ECON 8210 Economic Strategy**
Only open to Executive MBA students. Prerequisite: ECON 8200. A systematic study of economic forces affecting the business firm and their impact on corporate strategy.

**ECON 8300 Seminar in Current Topics**
MBA or MS in BIS Elective. Prerequisite: Consent of instructor. Topics of current importance and interest in economics.

Courses in Finance

**FINC 5320 Bank Financial Management**
MBA elective. Prerequisite: FINC 7100. Analysis and management of the asset and liability portfolio of depository financial institutions. Not open to students with credit for FINC 4320.

**FINC 5383 Applied Equity Analysis**
MBA elective. Prerequisite: FINC 3350 for undergraduate or FINC 7320 for graduate credit, and consent of instructor. Using modern models of equity valuation, students analyze company and industry data, estimate fair value for equities, and then present their recommendations to a panel of industry experts. Once approved, the students’ equity selections will then be implemented in the Ford Investment Trust. Students must apply to enroll in the course; check with the Department for application forms and deadlines. Enrollment is limited to 15 students, no more than 5 of whom may be graduate students.

**FINC 7100 Finance Fundamentals**
Prerequisite: ACCT 7100, passing score on Excel assessment. This course provides students with the essential skills required to successfully complete the FINC 7311 course. The course will cover financial statement and cashflow analysis, time value of money and its applications to both financial and real assets, and risk and rates of return.

**FINC 7301 Financial Management**
MBA foundation course. Prerequisites: ACCT 7302, ECON 7300, and ECON 7320 or equivalent. Financial resources management; emphasis on financial statement analysis, time value of money, valuation of financial assets, capital budgeting, cost of capital, capital asset pricing, capital structure and dividend policy.
**FINC 7311 Applied Corporate Finance**  
Prerequisite: ACCT 7304, ECON 7313, FINC 7100 or pass assessment-ECON 7200, MGMT 7180 (may be taken concurrently). This course fully develops the analysis of financial statements and cash flow and then examines the investment and financing decisions are discussed in the context of information asymmetry, potential agency problems, and corporate governance. The course stresses the application of finance theory to real life business situations through the use of case studies.

**FINC 7320 Advanced Investment Analysis**  
MBA or M.S. in BIS elective. Prerequisite: FINC 7301 or equivalent. Evaluation of capital markets, analytical techniques useful for security analysis; emphasis on analysis of stocks, bonds in portfolio management.

**FINC 7323 Bank Financial Management**  
Prerequisite: FINC 7301 or equivalent. Analysis and management of the asset and liability portfolio of depository financial institutions.

**FINC 7325 Financing Entrepreneurial Ventures**  
MBA or M.S. in BIS elective. Prerequisite: FINC 7100. Explores financing alternatives and concepts as they relate to new and growing ventures. Among the financing alternatives discussed are debt financing from banks, SBIC’s and other asset based lenders, and equity financing from angel investors, private placements, venture capitalists, and private equity markets. Students are required to analyze financing needs and use firm valuation methods.

**FINC 7330 Insurance and Risk Management**  
MBA or M.S. in BIS elective. Prerequisite: FINC 7100 or equivalent. Nature of risk; risk management concept; relationship of risk management to business functions; insurance’s nature, role as a risk management technique in business, personal affairs; includes property, liability, personal insurance lines.

**FINC 7335 International Finance**  
MBA elective. Prerequisite: FINC 7301 or equivalent. Multinational corporate finance; practices and problems in international finance; balance of payments and foreign exchange problems; recent trends and developments in international finance.

**FINC 7340 Real Estate Markets**  
MBA or M.S. in BIS elective. Real estate analysis; includes real estate typology, elements of real property law, basic contractual arrangements in real estate business, sources of financing, market-comparison valuation, government policies affecting real estate and local zoning, real estate taxation practices. (For business-oriented students with no real estate background).

**FINC 7350 Financial Institutions and Organizations**  
MBA or M.S. in BIS elective. Prerequisite: FINC 7100 or equivalent. Functions of financial intermediaries; assets, liabilities management analysis; historical highlights, future growth
prospects; problems, solutions.

**FINC 7399 Independent Study**
MBA or M.S. in BIS elective. Prerequisites: All Foundation courses, 12 credits of Core courses, and consent of instructor. Intensive research under faculty supervision on approved topic in an area not covered in depth through regularly scheduled courses; research paper required.

**FINC 8300 Seminar in Current Topics**
MBA or M.S. in BIS elective. Prerequisite: Consent of instructor. Topics of current importance and interest in finance.

Courses in International Business

**IBUS 5316 Field Study in International Business**
Prerequisite: Completion of MBA foundation courses or equivalent. This course includes an international trip which provides students an opportunity to explore firsthand the international dimensions of business, to identify and pursue strategic issues in businesses, and to gain an awareness of how cultural, economic, political, and legal environments influence business practices. Prior to travel, students study and prepare reports on the country to be visited, and upon return, prepare summaries of their experiences, comparing pre- and post-visit perceptions. This course has a fee for travel costs and host institution fees. This course is not open to students with credit for IBUS 4316 unless the international trip is to a different country than the one visited for IBUS 4316.

Courses in Management

**MGMT 5365 Business Consulting**
MBA or M.S. in BIS elective. Teams of students consult with local small businesses recommended by the Small Business Development Center. Students work on problems in accounting, production, marketing, personnel, finance, insurance, law, and information systems. Student teams write reports outlining the problems and recommended solutions. This course is not open to students with credit for MGMT 4365.

**MGMT 5375 Sustainable Business**
A cross-disciplinary course to introduce students to the emerging field of sustainability and its triple-bottom line focus on the social, environmental, and economic impacts of business. Dual-listed in the UALR Undergraduate Catalog as MGMT 4375. Three credit hours.

**MGMT 5383 Issues in Entrepreneurship**
MBA or M.S. in BIS elective. A significant exposure to the entrepreneurial process. Interaction with real-world entrepreneurs will enhance the entrepreneurial decision-making abilities of the students. This course is not open to students with credit for MGMT 4383. Three credit hours.

**MGMT 7101 Developing Leadership Skills I**
MBA core course. Review of key managerial skills which include ethical decision-making, teamwork, oral presentations, influencing others, and critical thinking. The course conceptually introduces the skills and familiarizes participants with measures to be used in evaluating the development of skills throughout the MBA. Sporadic practice opportunities will be utilize to enhance understanding of skills and to assess the degree of skill development at the front end of the MBA. Results of assessments will be instrumental in designing action plans for skills development and in establishing a baseline to compare future assessments.

**MGMT 7102 Developing Leadership Skills II**
Prerequisite: MGMT 7101. Practice and development of key managerial skills, which include ethical decision-making, teamwork, oral presentation, influencing others, and critical thinking. This course emphasizes learning by experience; students will have opportunities to apply the skills in a variety of MBA courses. Feedback from a variety of sources (i.e., peers, instructors, self) will follow each practice opportunity. Students will be asked to reflect on feedback, design plans of actions that tackle performance deficiencies, and demonstrate quantifiable evidence of skill improvement in subsequent applications.

**MGMT 7180 Strategy for Competitive Advantage I**
Prerequisite concurrent: MGMT 7101. An introductory course that holistically integrates business disciplines in ways that promote analysis and decision making. The interdependent roles of all disciplines in the MBA program are examined, relative to analyzing business situations.

**MGMT 7210 Operations and Supply Chain Management**
Prerequisite: ECON 7200. This course addresses important concepts and issues related to the design and management of business operations including manufacturing, distribution, logistics, transportation, supply chain, and service operations. Frameworks for designing, managing, and analyzing the supply chain operations needed to support a firm’s business strategy are introduced. The course links strategic and operational supply chain decisions for the student, forming a holistic view of business operations and the application of quantitative methods to address operational and supply chain issues.

**MGMT 7250 Strategic Mgmt of IS & Tech**
Prerequisite: ACCT 7304, ECON 7313 and MGMT 7180. Focus on strategic and operational roles of information systems and technology (IS) and other information resources, including their
applications, value-adding processes, sourcing, governance, organizational and strategic alignment as well as limitations. Management of the IS asset portfolio using a risk/reward framework considering life cycle, obsolescence, innovation, and strategic impact.

**MGMT 7280 Strategy for Competitive Advantage II**
Prerequisite: MGMT 7180, MGMT 7210, MKTG 7311, FINC 7311 (prerequisite concurrent) and enrollment in last semester or progression to the last nine MBA program hours. This course develops a process for deriving business strategies, with emphasis on strategic concepts, techniques, and application to business planning and implementation to achieve competitive advantage.

**MGMT 7302 Management and Organizational Behavior**
MBA and M.S. in BIS foundation course. A study of the theories of management and the behavioral sciences, which are directly related to understanding, predicting, and influencing human behavior in organizations.

**MGMT 7308 Advanced Business Communication**
M.Ss in BIS core course. MBA elective. Analysis of communication issues in the global socio-technical environment. Assessment of organizational communication systems. Refinement of written and verbal communication competencies.

**MGMT 7310 Management of Human Capital**
MBA core course or M.S. in BIS elective. Provides the foundations for managing people in organizations. It includes theories addressing the psychology of management (e.g., motivation, work attitudes) and a review of the human-resource processes (e.g., selection, training) that assist in maximizing human capital. Heavy emphasis is placed on the applied view of topics.

**MGMT 7311 Entrepreneurship and Small Enterprise Management**
MBA or M.S. in BIS elective. Prerequisites: ACCT 7302, FINC 7310, MKTG 7300 or equivalent courses. Problems associated with entrepreneurship; emphasis on small enterprises, feasibility studies of new small enterprises.

**MGMT 7312 Team Development**
MS in BIS Core Course or MBA Elective. Organizational theory and principles of developing and managing teams.

**MGMT 7313 Commercializing Innovations**
Course Description: The students will work in teams to develop new products and formulate their pathway to market utilizing a business plan methodology. This course focuses upon innovation, multi-discipline integration, problem solving, and decision-making. The learning that occurs in this course is equally applicable in a startup venture as it is in a medium or large organization.
MGMT 7335 International Management
MBA or M.S. in BIS elective. Introduction to international business; particular issues and problems associated with managing business operations in multinational enterprises; management responses to these problems.

MGMT 7340 Collective Bargaining
MBA or M.S. in BIS elective. Aspects of labor-management relations; includes union organization, legal parameters, agreement negotiation, day-to-day administration of union-management agreement; emphasis on roles of industrial relations managers, line managers; extensive use of case studies.

MGMT 7341 Strategic Human Resource Management
MBA or M.S. in BIS elective. This course examines human resource management (HRM) from a strategic proactive perspective. Students consider HRM functional activities from the perspective of competitive advantage and added value. Specific topics include globalization, the legal environment, recruitment, retention, performance appraisals, rewards, employee relations, and planning.

MGMT 7345 Employment Law for Managers
This course examines the laws that regulate the employment relationship with an emphasis on helping managers comply with this law. Topics include employment discrimination (age, religion, color, gender, national origin, race, disability), pre-employment inquiries and testing, seniority and promotions, affirmative action, sexual harassment, equal pay requirements, overtime and minimum wage rules, employee dismissal issues, worker safety and health, gay and lesbian work issues, employee privacy, time-off requirements, employment lawsuits, union issues, and whether someone is an employee or independent contractor. Legal cases are used extensively to increase student comprehension.

MGMT 7370 Issues in Manufacturing and Operations Management
MBA or M.S. in BIS elective. Prerequisite: All Core courses. Concerns of manufacturing, service management; includes product and process design, plant capacity and location, work force development, scheduling, inventory control, product and service improvement, vendor relations; emphasis on resource and functional integration, information systems use, team solutions, global marketplace competition strategies; decision-making tools such as forecasting, queuing theory, simulation, network analysis.

MGMT 7371 Production/Operations Management
MBA or M.S. in BIS elective. Prerequisite: ECON 7320 or ECON 7313, or equivalent. A study of traditional ideas and techniques of production/operations management as well as contemporary practices and concepts being employed by businesses. In this course, the term “production” refers to the conversion of labor hours, dollars, materials, and skills (inputs) into products or services.
MGMT 7380 Corporate Strategy  
MBA Core Course. Capstone course to be taken at the end of the program. Prerequisites: FINC 7311, and enrollment in last semester or in last nine program hours. Process for deriving corporate, business strategies; emphasis on strategy concepts, techniques, application to small, large private sector corporations, nonprofit organizations.

MGMT 7398 Seminar in Current Topics  
MBA or MS in MIS Elective. Prerequisite: Consent of instructor. Topics of current importance, interest in management.

MGMT 7399 Independent Study  
MBA or MS in MIS Elective. Prerequisites: All Foundation courses, 12 credits of Core requirements, and consent of instructor. Intensive research under faculty supervision on approved topic in area not covered in depth through regularly scheduled courses; research paper required.

Courses in Marketing

MKTG 7301 Marketing Analysis, Planning, and Control  
MBA and M.S. in BIS foundation course. Prerequisite: graduate standing. Marketing principles, structure, framework from managerial perspective; role of basic marketing functions (price, product, distribution, promotion) in determination and implementation of strategy and other marketing decision-making activities; significance of legal and ethical precepts; increasing role of global marketing activities.

MKTG 7311 Marketing for Profit and Growth  
Prerequisite: ACCT 7100, ECON 7100, FINC 7100. MBA core course or M.S.-BIS elective. Proper evaluation of the actors and environmental forces within markets to formulate and execute effective local and global marketing strategies including business models, segmentation, target marketing, positioning, differentiation, branding, the marketing mix or 4 p’s (price, product, place, promotion), integrated marketing communications, product management, and new product development. Course also includes the use of marketing metrics, development of marketing plans, and anticipating the effect of the business cycle on marketing efforts.

MKTG 7312 Markets Analysis  
MBA or M.S. in BIS elective. Prerequisite: ECON 7200. Prerequisite concurrent: MKTG 7311. Analysis of consumer and intermediate markets for purposes of developing marketing strategy; includes income and expenditure patterns, buying decision processes, buyer behaviors, and consumption patterns.
**MKTG 7313 Marketing Research and Information Systems**
MBA or MS in BIS elective. Prerequisite: ECON 7200. Prerequisite concurrent: MKTG 7311. Research methods, application to marketing decision-making; includes problem definition, research design, sampling, data collection and analysis, research presentation.

**MKTG 7314 Product Innovation**
MBA or M.S. in BIS elective. Prerequisite concurrent: MKTG 7311. Relationship between marketing, innovation, communications; builds on behavioral base for insights to product innovation, marketing communication process; behavioral, communication concepts for developing marketing communications programs.

**MKTG 7316 Global Marketing**
MBA or M.S. in BIS elective. Prerequisite: all core courses. Primary dimensions of the global marketing environment; introduction to international marketing research problems and approaches; planning for global marketing operations and managing the global marketing mix.

**MKTG 7320 E-Commerce: Strategic Issues**

**MKTG 7330 Services Marketing**
MBA or BIS elective. Examines the major differences between goods and services, as well as the problems associated with the differences. Strategic aspects of services marketing mix are discussed with emphasis on the delivery of high quality services and the management of service employees. The course is conducted in a seminar style and makes use of the case study method. Not open to students with credit for MKTG 4330 or MKTG 5330.

**MKTG 7381 Law and Ethics in Business**
MBA and M.S. in BIS elective. This course instructs the student in the foundations of law that constitute the framework for doing business in the United States. Specific fields of concentration include: constitutional principles, contract formation and remedies, tort and product liability property, environmental regulation, securities regulation, and government mandates. All topics will be explored with a focus on ethics together with an analysis of the social and political issues that influence the workplace.

**MKTG 7399 Independent Study**
MBA or M.S. in BIS elective. Prerequisites: all foundation courses, 12 credits of core courses, and consent of instructor. Intensive research under faculty supervision on an approved topic in an area not covered in depth through regularly scheduled courses; research paper required.

**MKTG 8300 Seminar in Current Topics**
MBA or M.S. in BIS elective. Prerequisites: consent of instructor. Topics of current importance, interest in marketing.
The new College of Education and Health Professions brings together several of UALR’s most well established and successful professional programs that are each individually accredited.

By emphasizing multidisciplinary collaboration and sharing departmental strengths, the new college is poised to become a 21st century leader in opening doors to high-demand careers for graduates of all ages. Enthusiasm and support for the reorganization prevail throughout its departments and across the campus.

The college offers various master’s, education specialist, and a doctorate degrees. Programs in the college, which prepare educational professionals, are accredited by the National Council for Accreditation of Teacher Education (NCATE) and endorsed by national specialty professional associations.

<table>
<thead>
<tr>
<th>Program</th>
<th>Certificate or Degree Program</th>
<th>Department/School</th>
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<tbody>
<tr>
<td>Adult Education</td>
<td>Master’s (M.Ed.)</td>
<td>Counseling, Adult &amp; Rehabilitation Education</td>
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<td>Counselor Education</td>
<td>Master’s (M.Ed.)</td>
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<td>Rehabilitation of the Blind</td>
<td>Master’s (M.A.)</td>
<td>Counseling, Adult &amp; Rehabilitation Education</td>
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<td>Counseling, Adult &amp; Rehabilitation Education</td>
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<td>Counseling, Adult &amp; Rehabilitation Counseling</td>
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<td>Educational Administration &amp; Supervision</td>
<td>Master’s (M.Ed.)</td>
<td>Educational Leadership</td>
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<td>Educational Administration &amp; Supervision</td>
<td>Educational Specialist</td>
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<td>Doctorate (Ed.D.)</td>
<td>Educational Leadership</td>
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<td>Curriculum/Program Administration &amp; Supervision</td>
<td>Graduate Certificate</td>
<td>Educational Leadership</td>
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<td>Graduate Certificate</td>
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<td>Superintendency</td>
<td>Graduate Certificate</td>
<td>Educational Leadership</td>
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<td>Gifted, Creative, and Talented Education</td>
<td>Master’s (M.Ed.)</td>
<td>Educational Leadership</td>
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<td>Certificate</td>
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<td>Higher Education</td>
<td>Doctorate (Ed.D.)</td>
<td>Educational Leadership</td>
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<td>Master’s (M.Ed.)</td>
<td>Educational Leadership</td>
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<td>Certificate</td>
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<td>Master’s (M.Ed.)</td>
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<td>Educational Specialist</td>
<td>Teacher Education</td>
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<td>Reading</td>
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<td>Teacher Education</td>
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<td>Training Program</td>
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<td>Master's (M.Ed.)</td>
<td>Teacher Education</td>
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<td>Doctorate (Au.D.)</td>
<td>Audiology &amp; Speech Pathology</td>
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<td>Communication Sciences &amp; Disorders</td>
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<td>Gerontology</td>
<td>Certificate</td>
<td>Social Work</td>
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<td>Health, Human Performance and Sport Management</td>
<td>Master’s (M.S.)</td>
<td>Health, Human Performance &amp; Sport Management</td>
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<td>Social Work</td>
<td>Master’s (M.S.W.)</td>
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Courses in Educational Foundations

**EDFN 7142, 7242, 7342 Seminar**
Topics related to educational foundations concepts. Offered on demand.

**EDFN 7143, 7243, 7343 Workshop**
Hands-on experiences related to education; topics vary. Offered on demand.
EDFN 7303 Introduction to Educational Research
Prerequisite: graduate standing. Introduction to applied research in education across the major quantitative, qualitative, and action research traditions. Focus is on understanding the research process and its integrated components and evaluating published research reports from the perspective of a critical consumer. Topics include scientific reasoning, types of variables and hypotheses; sampling; data collection and instrumentation; control procedures; common experimental, non-experimental, qualitative, and mixed methods research designs; data analysis; and research critiques and proposals.

EDFN 7304 Basic Statistics
Introduction to descriptive and inferential statistics used in education and data-driven decision making. Topics include commonly used descriptive statistics, exploratory data analysis, standardized scores, inferential reasoning, hypothesis testing, and parametric and nonparametric procedures and their assumptions including t-tests, one-way analysis of variance, correlation coefficients, bivariate regression, and chi-square. Emphasis is on understanding the logical bases of statistical tests of significance, selecting appropriate data analysis techniques, and using statistical software and interpreting its output.

EDFN 7305 Introduction to Program Evaluation
Covers select models of summative and formative evaluation with a focus on social science methods of inquiry for the purpose of evaluating programs in education, government and non-profit agencies, the health professions, and the military. Topics include organizational goals, models of program evaluation, accountability evidence, research methods and techniques, data-driven decisions, justifying conclusions, and report writing with clarity. Students will design a program evaluation that attends to diversity, sensitivity, and has value to a broad range of stakeholders.

EDFN 7307 History and Philosophy of Education
Historical, philosophical factors and trends; their effect on American education.

EDFN 7308 Multicultural Education Trends and Issues
Multicultural education movement in the U.S., selected western industrial nations; includes historical development, goals, implementation.

EDFN 7313 Learning Theories and Instructional Applications
Major theories of human learning and psychological principles of learning for instruction, including systematic instructional design and models of effective instruction; contemporary issues with implications for practice.

EDFN 7314 Cognition and Instruction
Prerequisite: EDFN 7313. Exploration of recent developments in cognition and the implications for instructional practices resulting from theory and research in cognitive psychology.

EDFN 7320 Advanced Educational Psychology
Prerequisite: EDFN 7313. This course addresses a variety of contemporary issues that affect academic performance. Topics are organized around the traditional categories of learning, identity development, motivation, discipline, and assessment. Students study different theoretical approaches to articulate and ultimately defend a personal theory of learning and teaching.

EDFN 7330 Human Development
Prerequisite: graduate standing. A lifespan perspective that addresses cognitive, physical, social and emotional development from birth through late adulthood. Special emphasis on developmental factors that effect schooling (P-12).

EDFN 7370 Educational Assessment
Assessment, evaluation; role of measurement in education and human service agencies; psychometric properties of norm-referenced and criterion-referenced tests; construction of test items with specialized considerations for atypical populations such as young children, culturally different, and those with exceptionalities; use and interpretation of standardized tests in educational settings.

EDFN 7373 Qualitative Research Methods
Prerequisite: EDFN 7303. This course has primarily a twofold purpose: to expose students to the knowledge base, tradition, and theory of qualitative research. While introductory in nature, this course allows students to explore theoretical underpinnings as well as consider methodological strategies in preparation for designing a research project and writing it up for presentation.

EDFN 8301 Instructional Research and Data Management
Prerequisite: EDFN 7303. Application of research methods and data analysis techniques to the study of instruction and reflective practice. Topics include models of quantitative, qualitative, and mixed methods research; the application of research designs in the classroom; control procedures; evaluation research; and data analysis including statistical software and approaches to analyzing qualitative data. Note: This is a project-based course and requires a research proposal or completed action research.

EDFN 8305 Intermediate Statistics
Prerequisite: EDFN 7304. A second course in statistics that covers the more complex analyses used in education and data-driven decision making. Topics include simple and multiple linear regression, one- and two-factor fixed factor analysis of variance, random and mixed model analysis of variance, randomized block, hierarchical analysis of variance, and analysis of covariance. Emphasis is on further understanding the logical bases of statistical tests of significance, selecting appropriate data analysis techniques, and using statistical software and interpreting its output.

EDFN 8306 Advanced Educational Research
Prerequisites: EDFN 7303, EDFN 7304. A second course in quantitative, qualitative and mixed methods research designs commonly used in education. Topics include the philosophy of science, research problems, control procedures, sampling designs, measurement procedures, data
collection strategies, and approaches to data analysis. Focus is on complex designs across the research traditions, writing critical reviews, and writing research proposals that include sound methodology.

**EDFN 8308 Advanced Statistics**
Prerequisites: EDFN 8305. An advanced course in statistics that covers complex analyses used in education and data-driven decision making. Topics include multivariate analysis of variance, loglinear analysis, discriminate function, canonical correlation, and an introduction to structural equation modeling and confirmatory factor analysis. Emphasis is placed on providing solid skill in the use of the major statistical software packages for the purposes of program evaluation or other advanced analysis requirements.

**EDFN 8310 Applied Measurement in Research and Analysis**
Prerequisite: EDFN 8305 and 8306. Theoretical bases of measurement in education, applied measurement techniques, and practical approaches to the design and analysis of data collection instruments. Topics include psychometrics, scale construction, and instrument design and development.

**EDFN 8383 Advanced Qualitative Research Methods**
Prerequisite: EDFN 7373. A second course that is designed to provide students with an in-depth exploration into the philosophy, theory and practice of naturalistic inquiry. Students will explore the philosophical foundation of post modern research. Furthermore, students will study a variety of qualitative research design, data collection, data analysis, and report writing methods. Students will conduct a research study and receive feedback on the study’s design specific to a single tradition of qualitative inquiry, on data collection, on data analysis, and on drafting the narrative.
Master of Education in Adult Education

The Master of Education in Adult Education (ADED) encompasses a broad field, including many interests and competencies, and is not limited to a single discipline, institution, program, or agency. The overall purpose of this UALR graduate program is to prepare present and future leaders for positions of responsibility in diverse educational contexts.

The field of adult education includes professional education (e.g., engineering, medicine, nursing, law), volunteer training, technical education (e.g., community colleges, vocational schools), adult basic education, and in-service education (e.g., business and industry, government). Graduates of this program find positions as learning facilitators, training and program directors, administrators, and curriculum specialists in programs for adults.

The M.Ed. in Adult Education is an intensive professional development experience. Students are self-directed, committed professionals seeking to improve themselves, their work places, their communities, and society. To accomplish this, an individualized program of study is designed with each student, allowing for specific interests, needs, and career goals. The Adult Education program is designed to meet the needs of professionals in any type of lifelong learning environment who wish to continue their education at the graduate level.

The program may lead to Arkansas teacher licensure or may be tailored to meet other professional needs and goals. For more information, visit the program website.

Admission Requirements

All applicants for both regular and conditional admission statuses must have favorable recommendations from the Adult Education program coordinator.

Regular Admission

- Baccalaureate degree from a regionally accredited institution with a cumulative grade point average of at least 2.75 (4.0 scale), or
- Grade point average (GPA) of at least 3.0 for the last 60 hours of undergraduate courses, or
- Master’s degree from a regionally accredited institution with a cumulative GPA of at least 3.0

Conditional Admission
- Baccalaureate degree from a regionally accredited institution, a cumulative undergraduate GPA no lower than 2.75, and a Graduate Record Exam (GRE) score of at least 144 on the Verbal Scale, 141 on the Quantitative Scale, and 4.5 on the Analytical Writing Scale, or
- Completion of at least 9 semester hours of graduate coursework at UALR or a graduate program from another regionally accredited college or university with a cumulative GPA of at least 3.0 and no grade lower than a B.

Program Requirements

The Master of Education in Adult Education degree requires 36 graduate credit hours, including nine adult education core hours, nine education core hours, nine to twelve adult education hours, six to nine approved elective hours, and a written comprehensive examination. All core courses must be completed with a grade of B or better.

Adult Education Core Courses

ADED 5301 Psychology of Adult Learning
ADED 5303 Teaching Adults
ADED 7301 Foundations of Adult Education

Education Core Courses

EDFN 7303 Introduction to Educational Research
EDFN 7370 Educational Assessment
LSTE 7303 Foundations of eLearning

Adult Education Courses

ADED 5304 Methods and Materials in Adult Education
ADED 7302 Organization and Administration of Adult Education
ADED 7303 Program Planning in Adult Education (Requires a B or greater)
ADED 7304 Teaching Reading to Adults
ADED 7305 Independent Study in Adult Education

Graduation Requirements

- Successful completion of an approved program of study

Courses in Adult Education

ADED 5301 Psychology of Adult Learning
Prerequisite: program admission or graduate standing and consent of instructor. Research, practices related to adult learning, development; cognitive, behaviorist, humanist adult learning
theories; stage, basic development theories. Offered on demand.

**ADED 5303 Teaching Adults**
Prerequisite: program admission or graduate standing and consent of instructor.
Teaching/learning process from planning to presentation; approved practices working with “disadvantaged” adult learners. Offered on demand. (Requires a B or greater)

**ADED 5304 Methods and Materials in Adult Education**
Prerequisite: program admission or graduate standing and consent of instructor. Andragogical methods; emphasis on individual and group learning methods and procedures, selecting materials appropriate for adult learners. Offered on demand.

**ADED 7105, 7205, 7305 Independent Study in Adult Education**
Prerequisites: advanced graduate standing, consent of advisor. Specific problems in adult education. Only three hours can count towards the degree; program students may take up to six hours. Offered on demand.

**ADED 7301 Foundations of Adult Education**
Prerequisite: program admission or graduate standing and consent of instructor. Past developments, present goals and objectives of adult education. Offered on demand.

**ADED 7302 Organization and Administration of Adult Education**
Prerequisite: ADED 7301. Organizational procedures, administrative practices for implementation, maintenance of effective programs. Offered on demand.

**ADED 7303 Program Planning in Adult Education**
Prerequisite: ADED 7301. Models for planning, designing, implementing, evaluating programs. Offered on demand.

**ADED 7304 Teaching Reading to Adults**
Prerequisite: ADED 7301. Methods, materials for teaching reading to adults; emphasis on adult learner’s needs. Offered on demand.

**ADED 7307-7607 Internship**
Prerequisite: 12 program hours. Practical experience in concentration, specialization area; requires at least 40 contact hours for each credit hour. Offered on demand.

**ADED 7308 Seminar**
Prerequisites: ADED 5301, 7301, 7303. Recent adult education research having direct application to adult educators in public schools, continuing education, cooperative education, related agencies, programs. Offered on demand.
Counselor Education

Dickinson Hall, Room 515, (501) 683-7443

Master of Education in Counselor Education

The Master of Education in Counselor Education (CNSL) program prepares individuals as elementary and secondary school counselors. Instruction is provided in working with students K-12 to help them benefit from their educational experiences; address educational, social, and personal problems; and prepare for careers and further education. The program is theory based and practice oriented.

The counselor education program also provides course work and training for individuals who already hold a master’s degree and wish to add certification as a school counselor and course work for individuals holding master’s degrees in related areas who need specific additional hours to qualify for their professional counseling license (LPC). School counselor certification requires an evaluation of transcripts by the program coordinator. Evaluation of transcripts by the Arkansas Board of Examiners in Counseling is required to identify specific courses needed to qualify for the professional counseling license (LPC). For more information about the graduate program in counselor education, visit the program’s website.

Admissions Requirements

Regular and Conditional Admission

All applicants must have:

- Eligibility for educator licensure. (Arkansas or other state)
- Interview and favorable recommendations from program faculty.
- Completed College of Education and Health Professions Biographical Data Form.
- Current résumé.

Regular Admission (additional requirements)

- Baccalaureate degree from a regionally accredited institution with a cumulative grade point average of at least 2.75, or
- Grade point average of at least 3.0 for the last 60 hours of undergraduate courses, or
- Master’s degree from a regionally accredited institution with a cumulative grade point average of at least 3.0
Conditional Admission

- Baccalaureate degree from a regionally accredited institution, a cumulative undergraduate GPA of no lower than 2.5, and a Graduate Record Exam (GRE) score of at least 144 on the Verbal Scale, 141 on the Quantitative Scale, and 3.5 on the Analytical Writing Scale, or
- Completion of at least 12 semester hours of graduate course work in another UALR graduate program or graduate program from another regionally accredited college or university with a cumulative GPA of at least 3.0 and no grade lower than a B.

Licensure

Students seeking school counselor licensure in Arkansas are required to have eligibility for an Arkansas Educator License. Eligibility requires a passing score on the Praxis I and Praxis II in the subject area of the license along with a completed degree or program of study in the area of the license. At UALR, the program of study or the master’s degree in Counselor Education is required for licensure in school counseling in Arkansas. A background check of criminal and/or other records is required by the Department of Education. See the Arkansas Department of Education for information regarding background checks. Candidates seeking licensure or certification in school counseling in other states need to check the requirements of the states where they plan to be employed.

Program Requirements

The Counselor Education degree requires a minimum of 36-48 credit hours depending on prior graduate work and undergraduate prerequisites, including 6 to 12 education core hours, depending on undergraduate preparation, 24 M.Ed. counseling core hours, nine supervised practice hours, SPED 7301 Foundations of Special Education or undergraduate equivalent, and six to nine approved elective hours depending on prior graduate work. Arkansas licensure in school counseling requires 48 graduate credit hours. If students have prior graduate work or a graduate degree, credit may be granted toward the 48-hour requirement for licensure but not the minimum 36 credit hours for the M.Ed. degree. For students without prior graduate credits, the degree is 48 credit hours. A student’s progress is evaluated after 12 semester hours, and the student’s advisor approves advancement to candidacy if progress is satisfactory. In addition, state certification requires a score of at least 600 on the Praxis II School Guidance and Counseling, examination.

Completion of the degree requires successful completion of a comprehensive examination. The comprehensive examination will be evaluated by program and department faculty for the student’s ability to synthesize knowledge in response to questions covering all areas of his / her study. It is offered three times a year on specified dates. Students who perform inadequately may retake the exam as many as two times, but additional course work or study may be required before the second retake.
Education Core Area Courses

EDFN 7303 Introduction to Educational Research  
EDFN 7330 Human Development  
LSTE 7303 Technology and Instruction in Society  
or equivalent

Electives

Electives may be chosen from this list. Other appropriate courses may be utilized as electives. All electives must be approved by the student’s advisor.

CNSL 7109, 7209, 7309 Independent Study  
CNSL 7310 Human Sexuality  
COUN 7362 Psychological Aspects of Disability*  
COUN 7369 Intro to Family Counseling*  
COUN 7370 Psychopharmacology in Counseling*  
EDAS 7303 Education Law and Ethics  
EDFN 7320 Advanced Educational Psychology  
LSTE 7303 Technology and Instruction in Society  
LSTE 7305 Survey of Computer Based Learning Systems  
READ 7326 Developmental Reading  
SCED 7301 Secondary School Curriculum  
SPED 5312 Medical Problems in Child Development  
SPED 7301 Foundations of Special Education  
SPED 7362 Direct Teaching of Social Skills in Children and Youth  
SPED 7365 Individualized Education Programs

*Courses also required for students seeking an LPC

Graduation Requirements

- Successful completion of an approved program of study as outlined above.
- Successful completion of the comprehensive exam or thesis.

Courses in Counseling: Counselor Education

Prerequisite for all courses: graduate standing and approval of program coordinator.

CNSL 7109, 7209, 7309 Independent Study

Prerequisites: graduate standing, consent of advisor. Topics of individual interest; might include aging, at-risk children, adolescence, handicapped children, child abuse, children of divorce, single parent families, ethics, children of alcoholic families, etc. One to three hours credit. Offered on
demand.

**CNSL 7206 Orientation to Industry and Occupations**
Includes social, economic perspectives of work world; emerging views of work; various topics related to employability and employment; plant/business tours; shadowing of workers; requires an individual project.

**CNSL 7211 Guidance and Counseling Fundamentals for Educators**
(Course for non-majors) Issues, functions, scope of guidance, counseling program in public education setting; programmatic components, counselor roles; counseling, delivery of services in multi-ethnic setting.

**CNSL 7300 Foundations for School Guidance and Counseling Programs**
Pupil services; includes pupil personnel services, models of guidance, the professional school counselor, pupil populations with special needs; emphasis on history, philosophy, organization, functions of guidance and counseling programs in the schools.

**CNSL 7301 Counseling Theories and Applications**
Experiential, relationship-oriented, cognitively-oriented, behaviorally-oriented approaches to counseling; emphasis on counselor as an instrument of counseling, development of a personal theory of counseling, legal and ethical responsibilities of counselors.

**CNSL 7302 Models and Techniques for Counseling Interviews**
Prerequisite: CNSL 7301. Techniques, procedures for counseling interviews; emphasis on mastery of levels of skills within a microskills hierarchy for counseling interviews, appropriate use of skills in various stages of counseling.

**CNSL 7303 Career Development, Planning, and Information Services**
Theoretical approaches to career development, planning; includes career development theories, planning, education, guidance models; needs of special populations, delivery systems.

**CNSL 7305 Appraisal Resources and Services in Counseling**
Emphasis on appropriate selection, administration, uses of a variety of testing, and other techniques; individual analysis; case management in the counseling setting.

**CNSL 7307 Theories and Techniques of Group Counseling**
Prerequisite: consent of instructor. Processes, theories of group counseling; developing personal approach for applying concepts, processes.

**CNSL 7308 Cross Cultural Counseling**
Prerequisites: CNSL 7300, 7301, and 7302, or consent of instructor. Environmental, personal, socio-economic, psychological characteristics of special client (culturally different) groups; counseling theories, techniques applied to culturally different individuals, and groups; emphasis on knowledge, skills in cross-cultural counseling; includes potential sources of misunderstanding.
investigated from various counseling modes.

**CNSL 7310 Human Sexuality**
Prerequisite: EDFN 7330, CNSL 7300, 7301, and 7302 or consent of instructor. Biological, psychosocial, behavioral, clinical, cultural factors; literature of; skills of communicating knowledge via counseling strategies for human sexual behaviors.

**CNSL 7312 Advanced Cross Cultural Counseling**
Prerequisite: CNSL 7308. This course expands upon the curriculum base in CNSL 7308 Cross Cultural Counseling through the identification of multiple intervention strategies with emphasis on advanced focus on school-aged youth and their families. It includes advanced emphasis on content and process development.

**CNSL 7313 Ethical and Legal Issues in the Counseling Profession**
Review of legal and ethical standards in school and community counseling related to counselor training, research, and practice. Topics include: client rights, confidentiality, the client-counselor relationship, professional relationships, duty to warn, counselor supervision, counseling minors and case law in counseling.

**CNSL 7320 Practicum: Counseling Services-Elementary Education**
Prerequisite: 20 – 24 semester hours completed in the CNSL program and consent of the instructor. Supervised practice in program management, information services, appraisal services in elementary school counseling; focus on operationalizing cognitive content of core courses. Requires 75 clock hours of counseling activities. Students must achieve a (B) or greater before enrolling in an internship.

**CNSL 7321 Practicum: Counseling Services-Secondary Education**
Prerequisite: 20 – 24 semester hours completed in the CNSL program and consent of the instructor. Supervised practice in program management, information services, appraisal services in secondary school counseling; focus on operationalizing cognitive content of core courses. Requires 75 clock hours of counseling activities. Students must achieve a (B) or greater before enrolling in an internship.

**CNSL 7330 Practicum: School Counseling**
Prerequisite: 20 – 24 semester hours completed in the CNSL program and consent of the instructor. Supervised practice in program management, information services, appraisal services in school counseling; focus on operationalizing cognitive content of core courses. Requires 100 clock hours of counseling activities. Students must achieve a B or greater before enrolling in an internship.

**CNSL 7331 Practicum: Counseling-Secondary Education**
Prerequisite: 20 – 24 semester hours completed in the CNSL program and consent of the instructor. Supervised experience in individual counseling, group counseling, case management in secondary schools; emphasis on application of cognitive content, practice of skills. Requires 75
clock hours of counseling activities. Students must achieve a B or greater before enrolling in an internship.

**CNSL 7340, 7640 Internship: School Counseling**
Prerequisite: consent of the instructor. Supervised internship in school setting; requires student involvement in a variety of on-the-job activities; includes program management, appraisal services, information services, case management, individual and group counseling, classroom guidance, teacher consultation, parent consultation, career guidance. Requires 100 clock hours of work per credit hour; 600 hours for degree. May enroll for three hours each of two semesters or six hours in one semester.

**CNSL 7341, 7641. Internship: Counseling Services-Secondary Education**
Prerequisite: consent of the instructor. Supervised practice in secondary school setting; requires student involvement in variety of on-the-job activities; includes program management, appraisal services, information services, case management, individual and group counseling. Requires 50 clock hours of work per credit hour; 300 hours for degree. May enroll for three hours each of two semesters or six hours in one semester.

**CNSL 7399 Thesis**
Prerequisites: 36 hours of graduate credit in counseling and educational foundations including Educational Foundations 7171 and 7303, and consent of the program advisor. Development of a formal research project; content determined in conjunction with a faculty committee chosen by the student. May be repeated for six hours total.

Courses in Interpreting for the Deaf

**INTR 5320 Survey of Communication Methods**
Communication methods/systems and languages (English and American Sign Language) used by children and adults who are deaf or hard of hearing; understanding the intra- and cross- cultural communication issues that provide the impetus for choice of communication method and/or language; focus will be on development of conceptually accurate sign language skills utilizing English structure in an interactive approach for receptive and expressive sign language fluency. Offered in spring
Rehabilitation of the Blind

There is a recognized national shortage of Orientation and Mobility specialists. In response to shortages of personnel in the rehabilitation and education fields specific to vision impairment, the Department of CARE offers a master of arts degree and a certificate program in Orientation and Mobility. The programs are available online through part-time study, including some face-to-face classes provided in Little Rock and, in special instances, in other states.

Dickinson Hall, Room 515 G, (501) 569-8129

Master of Arts in Rehabilitation of the Blind Orientation & Mobility

The Master of Arts in Rehabilitation of the Blind: Orientation and Mobility program develops skills in teaching both congenitally and adventitiously blind and low-vision persons in a wide range of education and rehabilitation agencies nationwide. The program offers an emphasis in orientation and mobility instruction. The program is open to both full-time and part-time students. Many of the courses are offered in a web-based format. Students may expect to enroll in one to three online courses each semester (two courses is the recommended maximum). Due to several significant budget cuts and the forthcoming retirement of the only faculty member in the Rehabilitation Teaching/Vision Rehabilitation Therapy Program, the University of Arkansas at Little Rock (UALR) is suspending admissions to the RT/VRT. The Orientation & Mobility and Rehabilitation Counseling Programs will continue. This emphasis teaches a reliable system for establishing and maintaining awareness of one’s position in the environment (orientation) and fostering freedom and spontaneity of movement (mobility). It enables blind and low-vision persons to overcome the severe problems of mobility by teaching them to travel safely, efficiently, and confidently.

The online Master of Arts degree program in Orientation and Mobility prepares professionals to provide orientation and mobility services to people who are blind or visually impaired. Orientation & Mobility specialists provide consumers with skills to maximize environmental information and to process and utilize it to make judgments and decisions for independent travel while using their remaining vision, long canes or dog guides. The program provides the course work and supervised fieldwork experiences required for certification by the Academy for the Certification of Vision Rehabilitation and Education Professionals (ACVREP).

Students must commit to coming to Little Rock for two consecutive summers to enroll in the blindfold simulation classes and student teaching. Summer classes usually run for the last three weeks in June, and students receive free room and some meals either at the Arkansas School for the Blind or at World Services for the Blind, where classes are held. In exchange for the living accommodations, students must agree to assist in light recreational duties (or student teaching responsibilities) with the children at the school. Internships may be arranged in the student’s
home community under the supervision of a certified O&M instructor. Students adhering to a
prescribed program of study may be able to complete the degree in 2.5-3 years. For more
specific information, visit the O&M program website. Sequential instruction in sensory and
movement skills is based on a thorough evaluation of needs and abilities related to the functional
use of the existing senses and requirements of a prosthetic travel aid. Instruction is provided in
the use of adaptive equipment such as canes, telescopes, and electronic travel aids. For more
specific information, visit the O&M program website.

Admission Requirements

Regular Admission

- Completed application to the UALR Graduate School
- Baccalaureate degree from a recognized accredited institution with a cumulative
  undergraduate grade point average (GPA) of at least 2.75 (4.0 scale) or 3.0 in the last 60
  hours (official transcripts required) or a master’s degree or higher from an accredited
  institution of higher education
- Interview with program coordinator
- A personally written essay of no more than 500 words describing the applicant’s
  background, experiences, and goals for choosing a career in Orientation and Mobility. There
  is no specific form or format that is required. Applicant’s name, address, telephone number,
  email, major, and semester to begin the program are to be included on the essay. The essay
  is to be sent to the program coordinator: orientation & mobility.
- Personal characteristics considered in the admission process include leadership potential,
  emotional and social maturity, innovation, and potential for success in the chosen emphasis
  area. All orientation and mobility instruction students must possess good health as well as
  communication skills such that they can monitor their blind clients’ safety at a distance
  beyond their reach.

Conditional Admission

If applicants do not meet the admission standards outlined above, they may be considered for
conditional admission with an undergraduate GPA of 2.5 or above and documented evidence of
their ability to succeed in graduate-level work. This documentation may include official transcripts
from all universities attended, successful graduate coursework from an accredited university,
examples of academic and professional work, test scores from the GRE and/or MAT, and letters of
reference. The program admissions committee will evaluate the documentation. Students must
move from conditional to regular status after the completion of 12 semester hours in the
program. They must have an overall GPA of at least 3.0 for the 12 credit hours of coursework and
a grade of B or greater in designated program courses.

Program Options
Students may extend their programs and complete a second master’s degree in a related area or a master’s degree and course work leading to certification eligibility in a second area. A minimum of 60 credit hours is required for two master’s degrees. Students electing one of these options must be fully admitted into both program emphases areas and be advised by the program coordinator.

National Certification

Graduates qualify to apply for national certification by the Academy for Certification of Vision Rehabilitation and Education Professionals. The Academy has established standard competencies that orientation and mobility graduates must meet for national certification.

Sample Program of Study by Semester

Students adhering to a prescribed program of study may be able to complete the degree in approximately 2.5 years.

Fall I:
RHBL 7316 Principles of O&M
RHBL 7315 Medical Aspects of Blindness and Associated Disabilities

Spring I:
COUN 7362 Psychological Aspects of Disability
RHBL 7325 Low Vision Implications

Summer I (in Little Rock):
RHBL 7317 Introduction of Methods of Mobility

Fall II:
COUN 7360 Rehabilitations Foundations
EDFN 7303 Introduction to Research (online or transferred in)
Three hour elective (online or transferred in)

Spring II:
SPED 7305 Managing the Learning Environment (online or transferred in)
*CNSL 7302 Techniques of the Counseling Interview
[*Please note this course requires a three-day workshop in Little Rock at the end of the semester. Accommodations may be made to offer the workshop in Little Rock just prior to or during the next summer term. Contact the course instructor for more details and information before registering.]
Summer II (in Little Rock):

RHBL 7318 Advanced Methods of Mobility  
RHBL 7390 Practicum in O&M  

Fall III:

RHBL 7395 Internship

This course requires a minimum of 275 direct teaching hours and a minimum of 350 total hours and can be taken in one’s home community. Full-time internships might be completed by the end of this semester or extended into the next academic term. Part-time internships will definitely extend into the next academic term. Site location and supervision must be approved by the faculty advisor.

Graduation Requirements

- Cumulative GPA of at least 3.0 in an approved program of study  
- Grades of B or greater in designated core courses  
- Grades of C or greater in all other approved courses

Graduate Certificate in Orientation and Mobility of the Blind

Students wishing to be qualified to apply for national certification in Orientation and Mobility (O&M) without seeking the master’s degree emphasis area in O&M may enroll in the Graduate Certificate in O&M. Students must hold a bachelor’s or master’s degree from an accepted university program.

Admission Requirements

Students must meet the same admission requirements as those who apply for the master’s degree program.

Program Requirements

Orientation & Mobility Foundations Courses:

RHBL 7325 Implications of Low Vision  
RHBL 7315 Medical Aspects of Blindness and Associated Disabilities  
COUN 7362 Psychological Aspects of Disability,  

or transfer into their program equivalent courses with approval of the O&M coordinator

Core Orientation & Mobility Courses (with a grade of B or better):
RHBL 7316 Principles of Orientation and Mobility for the Visually Impaired
RHBL 7317 Introduction to Methods of Mobility for the Blind
RHBL 7318 Advanced Methods of Mobility for the Blind
RHBL 7390 Supervised Practice and, RHBL 7395 Internship

Graduation Requirements

- Cumulative GPA of at least 3.0 in an approved program of study.
- Grades of B or greater in designated core courses.
- Grades of C or greater in all other approved courses.

Courses in Rehabilitation of the Blind

RHBL 5102, 5202 Workshop
Offered on demand.

RHBL 5302 WS: Basic Independent Living Skills for Individuals with Visual Impairments
Introduction to concepts and techniques to teach individuals with visual impairments the skills and knowledge needed to function in diverse environments. Topics related to the expanded core curriculum will include: concept and motor development, spatial organization and orientation, and skills in the areas of basic orientation and mobility, personal management, communication, and recreation & leisure. The course will be offered online with a required one-week hands-on workshop.

RHBL 7111 Introduction to Independent Living for Persons with Visual Impairments
Introduction to rehabilitation services, social services, professional organizations; introduction to daily living and communication skills for persons with visual impairments. Offered on demand.

RHBL 7112 Psychological Aspects of Blindness and Visual Impairment
Historical attitudes toward blindness; impact of culture and gender on attitudes toward disability, methodologies of attitude change, process of adjustment to blindness and vision loss. Offered on demand.

RHBL 7115 Techniques of Teaching Leisure Time Activities to Persons with Visual Impairments
Methodologies for teaching recreation and leisure skills to adults with visual impairments. Offered on demand.

RHBL 7191, 7291, 7391 Independent Study
Prerequisite: consent of instructor. Offered on demand.

RHBL 7193, 7293, 7393 Special Topics
In-depth study of a topic of special interest. Offered on demand.
RHBL 7270 Interpersonal Skills Training for Counselors
Carkhuff, related models of interpersonal skills development; focus on developing skill in providing core conditions of a helping/counseling relationship. Offered on demand.

RHBL 7302 Techniques for Helping Relationships
Techniques and procedures for engaging in and maintaining a professional helping relationship; emphasis on mastery of levels of skills within a microskills hierarchy for helping and supportive interviews. Note that CNSL 7302 is required for counseling licensure.

RHBL 7310 Methods of Teaching Adaptive Living Skills to Persons with Visual Impairments
Prerequisites: RHBL 5302 WS: Basic Independent Living Skills and RHBL 7312 Braille and Relevant Formats. Methodologies for teaching adaptive skills necessary to perform daily living activities; includes personal management, home management, medical management, and workplace management. Required one week hands-on workshop as part of the online course.

RHBL 7311 Methods of Teaching Adaptive Communication Skills to Persons with Visual Impairments
Prerequisite: RHBL 7312 Braille and Relevant Formats. Methodologies for teaching expressive and receptive adaptive communication skills, including Braille, keyboarding, handwriting, recording, and use of assistive computer technology. Required one week hands-on workshop as part of the online course.

RHBL 7312 Braille and Relevant Formats
Skills of reading and writing Contracted Standard English Braille, including transcription rules and formats, use of slate and stylus, use of Perkins Braillers. Students taking this course must have the potential ability to tactually or visually discriminate embossed Braille configurations and may use assistive devices as needed. Students who are uncertain of their ability to meet this requirement should contact the program coordinator for further information and clarification.

RHBL 7314 Principles of Rehabilitation Teaching
Prerequisites: consent of the instructor. Principles and philosophies of providing rehabilitation teaching services to adults of all ages with visual impairments; includes conducting needs assessment interviews, writing individualized teaching plans.

RHBL 7315 Medical Aspects of Blindness and Associated Disabilities
Anatomy, structure, function of the eye; frequently occurring diseases, malfunctions in children and adults; includes treatment procedures for disease process, rehabilitation and education implications of handicapped effects.

RHBL 7316 Principles of Orientation and Mobility for the Visually Impaired
Fundamental principles, theory of sensory information acquisition by the severely visually impaired for nonvisual locomotion; practical applications.
**RHBL 7317 Introduction to Methods of Mobility for the Blind**
Prerequisites: graduate standing, consent of instructor. Practical application of orientation and mobility techniques used by blind, visually impaired; blindfolds, low -vision simulators emphasize use of residual senses to perceive, integrate, react to environmental stimuli; examination, application of fundamental principles, theory of sensory information acquisition by the severely visually impaired. Hands -on workshop required.

**RHBL 7318 Advanced Methods of Mobility for the Blind**
Prerequisites: RHBL 7317, consent of instructor. Techniques of independent mobility for the blind; includes supervised blindfold activities in commercial, rural environments; requires special travel situations, use of public assistance and public transportation, shopping malls, in -store travel. Hands -on workshop required.

**RHBL 7325 Implications of Low Vision**
Prerequisite: RHBL 7315 Medical Aspects or consent of the instructor. Principles of visual perception development; implications of visual field losses; introduction to optics; optical, non -optics low -vision aids, procedures for vision screening; vision stimulation activities; low -vision simulation experiences. Required hands -on workshop as part of the online course or exemption from the course instructor.

**RHBL 7390 Supervised Practice**
Prerequisite: consent of the instructor. Faculty supervised practice in the use of required skills and competencies in the rehabilitation of individuals with visual impairments in rehabilitation or education settings.

**RHBL 7395 Internship**
Prerequisite: consent of the instructor. Professional rehabilitation work experiences in an appropriate rehabilitation or educational setting with individuals with visual impairments.

**RHBL 7399 Professional Project**
Prerequisite: consent of instructor. Development of an original professional paper or media production in student’s area of emphasis; content determined with faculty committee chosen by student; may be research project, grant proposal, philosophical statement, media production. Offered on demand.
Dickinson Hall, Room 515G, (501) 569-8129

Master of Arts Counseling: Rehabilitation Counseling

The Master of Arts in Counseling: Rehabilitation Counseling (COUN) is a 60 semester hour program aimed at preparing rehabilitation counseling professionals who will provide direct services and resource coordination for individuals with a disability seeking re-entry into the labor market. The program is offered in a 24-month sequence. All course work is at a distance and web-based with the exception of two skill-building courses, which require on-campus matriculation for three days each. Students are admitted on a full- or part-time basis. The program is accredited by the Council on Rehabilitation Education and recognized by the Arkansas Board of Examiners in Counseling. The purpose for the program is to permit graduates to qualify for national certification as rehabilitation counselors. For more information, visit the program’s website. With additional coursework, graduates of this program should qualify for licensure as professional counselors in Arkansas and other states.

Admission Requirements

Regular and Conditional Admission

All applicants must have:

- Completed an application for admission to the UALR Graduate School
- Completed a successful personal interview with a program faculty member or a designated representative

Regular Admission

- Bachelor’s degree from an accredited institution of higher education with an overall undergraduate GPA of 3.00 (3.25 in the last 60 hours)

or

- If the student’s undergraduate GPA is below a 3.00 overall or 3.25 in the last 60 hours, achieve the following minimum scores on the Graduate Record Exam (GRE): (Old Version) 440 on the Verbal and 560 on the Quantitative Scales or (New Revision) 149 on the Verbal and 146 on the Quantitative scales, or a scaled score of at least 391 on the Miller’s Analogy Test (MAT) will permit regular admission. For employed Rehabilitation Counselors who do not meet this standard, please see “Conditional Admission, Admissions Portfolio” below.
or

- Master’s degree from an accredited institution

Conditional Admission

Note: “Condition” means that the student must make a B or greater in the first 12 hours taken in the UALR Rehabilitation Counseling curriculum.

There are two categories within conditional admission:

1. Admission of students based on GPA for graduate hours at other accredited institutions:
   Students not qualifying for regular admission based on their undergraduate grade point averages may be admitted to the program on “condition” if they have successfully completed a minimum of nine semester hours in a relevant graduate program at UALR or another regionally accredited institution with a GPA of at least 3.0 and a grade of B or greater in each course taken.

2. Admission based on an Admissions Portfolio (For employed Rehabilitation Counselors only):
   Employed Rehabilitation Counselors have the option to submit a satisfactory Admissions Portfolio of academic and professional work to obtain conditional admission. The guidelines for the portfolio are available from the program coordinator. Letters of reference are not required unless specifically requested by the program coordinator.

Advanced Standing

Applicants who graduated from undergraduate rehabilitation programs and/or those with work experience as rehabilitation counselors will be admitted to advanced standing. Credit toward advanced standing will be awarded on an individual basis by the program coordinator upon recommendation of the program advisory committee.

Please note that credit awarded on the basis of Advanced Standing DOES NOT count towards the 60 hours required by the Arkansas Board of Examiners in Counseling or many other State Licensing Boards.

Program Requirements

The 60 credit hour curriculum has 4 components: Rehabilitation, Counseling, Foundations/Electives, and Field Work/Application. The field work requires 700 plus hours of supervised practice in a rehabilitation setting under the supervision of a certified rehabilitation counselor (CRC).
Transfer Credit

Students have the opportunity to transfer as many as 27 semester hours of credit from other accredited graduate programs.

Rehabilitation Courses (18 hours)

COUN 7360 Rehabilitation Foundations
COUN 7361 Medical Aspects of Disability
COUN 7362 Psychological Aspects of Disability
COUN 7363 Career Counseling and Placement
COUN 7364 Rehabilitation Case Management
COUN 7367 Assessment in Rehabilitation

Counseling Courses (18 hours)

CNSL 7301 Counseling Theories and Applications
CNSL 7302 Techniques for Counseling Interviews
CNSL 7307 Theories and Techniques for Group Counseling
CNSL 7308 Cross Cultural Counseling
COUN 7369 Introduction to Family Counseling
COUN 7370 Psychopharmacology for Counselors

Foundations/Elective Courses (Nine hours)

EDFN 7303 Introduction to Educational Research (Required)
EDFN 7330 Human Development (Required)
COUN 7368 Foundations of Substance Abuse (Elective)
COUN 7369 Introduction to Family Counseling (Elective)
COUN 7370 Psychopharmacology for Counselors (Elective)

Students are required to take three hours of elective credit from the three courses above and/or from other approved course work in counseling, rehabilitation, or other related areas.

Field Work/Application Courses (15 hours)

COUN 7365 Rehabilitation Counseling Practicum
COUN 7660 Internship in Rehabilitation Counseling

Graduation Requirements

An overall GPA of 3.00 in all courses in the program of study is required to complete graduation requirements for the Master of Rehabilitation Counseling program. There are core competency courses in which the student must achieve a “B” or greater. In the event that a “B” is not achieved in one of the core courses, the student must repeat the course.
Counseling: Rehabilitation Counseling - 2015-2016 Graduate Catalog

The core competency courses are as follows:

COUN 7360 Rehabilitation Foundations
COUN 7363 Career Counseling and Placement
COUN 7364 Rehabilitation Case Management
COUN 7365 Supervised Practice in Rehabilitation Counseling
COUN 7660 Internship in Rehabilitation Counseling
CNSL 7301 Counseling Theories and Applications
CNSL 7302 Techniques for Counseling Interviews
CNSL 7307 Theories and Techniques of Group Counseling
COUN 7367 Assessment in Rehabilitation

Post Master’s Certificate in Rehabilitation Counseling

This certificate program is a 24 semester hour graduate certificate program primarily directed at making employed/experienced rehabilitation counselors and other rehabilitation professionals eligible for national certification (CRC). The program is recognized by the Commission on Rehabilitation Counselor Certification (CRCC) as a provider of content that meets certification eligibility requirements. The program will also accommodate those with a master’s degree who have other professional goals (e.g., LPC licensure). The graduate certificate is offered online and admits both full- and part-time students.

The curriculum has two components: Counseling and Rehabilitation.

Admission Requirements

- Master’s degree from an accredited institution
- A completed application to the UALR Graduate School
- Personal interview with a program faculty member or a designated representative

Advanced Standing

At least 15 semester hours of this Graduate Certificate program must be taken at UALR. Students may be granted Advanced Standing credit of up to nine hours, for graduate course work from other accredited colleges or institutions.

Program Requirements

Curriculum Outline

The curriculum for the Rehabilitation Counseling Certificate is as follows:

I. Counseling (Six hours)
Counseling Theories and Applications
CNSL 7308 Cross Cultural Counseling

II. Rehabilitation (18 hours)
COUN 7360 Rehabilitation Foundations
COUN 7361 Medical Aspects of Disability
COUN 7362 Psychological Aspects of Disability
COUN 7363 Career Counseling/Placement
COUN 7364 Rehabilitation Case Management
COUN 7367 Assessment in Rehabilitation
OR other approved course substitutions

Total Program Requirements for Certificate – 24 hours

Program Rationale
The Graduate Certificate Program will allow counselors to submit the body of academic work required to sit for the Certified Rehabilitation Counselor (CRC) examination. Each course required to earn the certificate is also part of the program’s Council on Rehabilitation Education (CORE) accredited Master of Rehabilitation Counseling curriculum, and each course has been accepted in the past by the Commission on Rehabilitation Counselor Certification (CRCC) as counting toward fulfilling their Eligibility Requirements.
NOTE: In addition to the academic course work, CRCC requires appropriate work experience in order to qualify to sit for the national examination. More information is available on the CRCC [website]. CRCC will make the final determination on eligibility status.

Courses in Counseling: Rehabilitation Counseling

COUN 7190, 7290, 7390 Independent Study
Prerequisites: graduate standing, consent of instructor. Students under faculty supervision, can explore advanced topics in rehabilitation counseling not normally covered in regular course offerings.

COUN 7360 Rehabilitation Foundations
The purpose of this course is to provide both a broad foundation for students beginning their journey into the profession of rehabilitation and a broad-based reference for current practitioners. The content provides a conceptual overview of the professional, historical, theoretical, research, and applied foundations of the rehabilitation profession as they relate to the services for individuals with disabilities.
COUN 7361 Medical Aspects of Disability
Prerequisites: COUN 7360 or the consent of the instructor. This is a course that covers the medical aspects of disability. Managing the medical aspects and functional assessment of frequently occurring medical diseases and disorders of older adolescents and adults are stressed. Topics include the medical aspects and functional assessment of neurological/cognitive/neuromuscular disorders, psychiatric/developmental disabilities, sensory losses, and various acute and chronic physical diseases and disorders. Case management activities and a process for determining the educational/rehabilitation implications of the effects of each disability will be presented.

COUN 7362 Psychological Aspects of Disability
Prerequisites: COUN 7360 or the consent of the instructor. This course outlines the psychological and sociological aspects of disability, including community attitudes toward individuals with disabilities, strategies to change negative attitudes, adjustment factors in living with disabilities, and methods for supporting successful adjustment to disabilities.

COUN 7363 Career Counseling and Placement
Prerequisites: COUN 7360 or the consent of the instructor. The purpose of this course is to provide students with theories and techniques for empowering adults with disabilities to obtain integrated, community-based employment from a career decision making perspective.

COUN 7364 Rehabilitation Case Management
Prerequisites: COUN 7360, COUN 7361, COUN 7362, COUN 7367 or the consent of the instructor. This course is a study in case management in rehabilitation which is a skill that rehabilitation professionals must possess in order to successfully guide clients through the rehabilitation process from referral to case closure. It provides guidelines that will enable rehabilitation professionals to collect information from the intake interview, physician, psychologists, vocational evaluation, and other resources, in an effort to develop appropriate ethical rehabilitation plans with clients.

COUN 7365 Rehabilitation Counseling Practicum
Prerequisites: Must have completed all phase 1 courses and should have completed all core courses or consent of the program fieldwork supervisor. The purpose of this course is to provide students initial exposure to learning in a community based rehabilitation agency under faculty supervision. The course is designed to give the student an opportunity to practice the role of a rehabilitation professional. The student will apply rehabilitation counseling methods, techniques and vocational knowledge in working with clients and in consulting with business and industry for job development and placement opportunities. One-hundred contact hours in a fieldwork setting is required.

COUN 7367 Assessment in Rehabilitation
Prerequisites: COUN 7360 and EDFN 7303 or the consent of the instructor. The purpose of this
Course is to provide students with theories and techniques for empowering adults with disabilities to explore their aptitudes, interests, and other vocational assessments areas that assist them in career decision making.

**COUN 7368 Foundations of Substance Abuse**
This course focuses on substance abuse and coexisting disabilities from the perspective of risk and the challenges to rehabilitation practice. It provides the student with an in-depth understanding of substance abuse, drugs of abuse, patterns of abuse and consequences of abuse. Treatment models and needs are addressed from the rehabilitation model. New legislation and contemporary issues are presented to support the examination of the impact of policy on treatment and rehabilitation. The role of employment and the challenges of recovery and the return to employment are examined, within a comprehensive plan for relapse prevention. This course utilizes a diverse range of on-line resources as well as personal stories relating the challenges and dynamics of the recovery process.

**COUN 7369 Introduction to Family Counseling**
This course will provide knowledge about work with couples and families. This course will include understanding and application of general systems theory and the major schools of family theory. Methods for working with families with a disabled family member will be presented.

**COUN 7370 Psychopharmacology for Counselors**
A course intended to cover the areas of Psychopharmacology and the application of medication to all the major diagnostic categories contained in DSM-IV-TR. This course is intended for non-prescribing professionals.

**COUN 7660 Internship in Rehabilitation Counseling**
Prerequisites: the completion of all course work in the core and professional experience areas and the approval of the department faculty. The internship consists of advanced field work in rehabilitation counseling in an off campus field site placement. The Commission on Rehabilitation Counselor Certification requires 600 hours of applied experience in a rehabilitation agency or facility under the supervision of an experienced certified rehabilitation counselor on-site or facility supervisor. This course will provide a minimum of 300 of those field work hours. The course may be taken twice in the same semester to meet the 600 hour requirement. Completion of the second section of this course requires passing grade on the certified rehabilitation counselor (CRE) exam.
Educational Administration and Supervision

Dickinson Hall, Room 419, (501) 569-3267
The Educational Administration and Supervision program at UALR includes three graduate degree programs (master’s, specialist, and doctorate) and three graduate certificate programs (Building Level Administration and Supervision, Curriculum/Program Administration and Supervision, and Superintendency).

Graduate Degree Programs

Master of Education in Educational Administration and Supervision
The graduate program in Educational Administration and Supervision (EDAS) prepares students for leadership positions in schools, school districts, or state offices. In addition, students may prepare for Arkansas licensure as P-12 principals, supervisors, or central office administrators. The programs include both classroom instruction and field experiences.

Admission Requirements
All applicants must meet the following requirements:

- A valid teaching license. (Arkansas or other state) or, if a candidate does not have a valid teaching license, he/she will provide written documentation by signing a statement that acknowledges his/her understanding that he/she is ineligible for state licensure for school administration without a valid teaching license.
- At least two years professional experience in K-12 settings. (Please note: Four years of experience is required to be eligible for administrative licensure. Candidates may accrue this experience while in the program.

Regular Admission. (Additional Requirements)

- Baccalaureate degree from a regionally accredited institution with a cumulative GPA of at least 2.75 (4.0 scale), or
- Grade point average of at least 3.0 for the last 60 hours of undergraduate courses, or
- Master’s degree from a regionally accredited institution with a cumulative GPA of at least 3.0

Conditional Admission (for applicants who meet the basic admission requirements but not the regular admission requirements)

In order to be eligible for conditional admission, an applicant must meet the following
requirement:

- Baccalaureate degree from a regionally accredited institution with a cumulative undergraduate GPA of no lower than 2.7 (on a 4.0 scale)

Once admitted on this basis, the student must take the following courses as an indicator of his/her scholarly work during the first 12 hours and maintain a 3.5 average GPA:

EDAS 7300 Foundations of Educational Administration
EDAS 7304 Supervision of Learning Services
EDAS 7305 The Principalship
EDFN 7303 Introduction to Research

Program Requirements

Students must develop a Program of Study (POS) with the consultation of their assigned advisor in the first semester of admittance into the program. The approved POS is an abiding document and it guides students about steps they need to take towards the completion of their degrees. The building level licensure program is embedded in the masters program. Failure to progress satisfactorily will result in the removal of the candidate from the program. The POS includes the following required courses that constitute the standards associated with that body of knowledge and the application of appropriate skills and dispositions to be a successful practicing administrator.

Program of Study

Program co-requisite:

SPED 4301 The Exceptional Learner (or equivalent)

Educational Administration and Supervision (24 credits)

EDAS 7300 Foundations of Educational Administration
EDAS 7301 Administration & Assessment of Curricular Programs
EDAS 7302 School Finance and Human Resource Allocation
EDAS 7303 Educational Law and Ethics
EDAS 7304 Supervision of Learning Services
EDAS 7305 The Principalship
EDAS 7309 Building Coalitions with School and Community
EDAS 7310 Facilitating School Improvements

Educational Foundation Courses (6 credits)

EDFN 7303 Introduction to Educational Research
EDFN 7304 Basic Statistics
Building Level Internship (6 credits)
EDAS 7380 Administrative Internship (1st Semester)
EDAS 7380 Administrative Internship (2nd Semester)

M.Ed. Graduation Requirements

- Successful completion of an approved Program of Study
- Successful presentation and approval of the Master of Education Portfolio
- Successful completion of the Chalk and Wire requirements

Educational Specialist in Educational Administration and Supervision

The Educational Specialist (Ed.S.) is an advanced graduate experience for professional educators who wish to specialize in some aspects of educational administration and supervision or to upgrade their skills and licensure. The Ed.S. program presumes that students have the prerequisite basic administrative skills and knowledge to embark on an advanced program. Students deficient in any area are required to address those deficiencies as part of their programs.

Admission Requirements

- Master’s degree from a regionally accredited institution
- A grade point average (GPA) no lower than 3.0
- Completed Biographical Data Form.
- Two letters of recommendation addressing potential leadership ability and success in a graduate program
- Valid teaching license
- Students must have at least four years’ experience in the content area by the completion of their programs

Conditional Admission

In order to be eligible for conditional admission, an applicant must meet two out of the four following requirements:

- Master’s degree from a regionally accredited institution with a cumulative GPA of 3.0. (on a 4.0 scale)
- Graduate Record Exam (GRE) score of at least 144 on the Verbal Scale.
- Graduate Record Exam (GRE) score of at least 141 on the Quantitative Scale.
- Graduate Record Exam (GRE) score of at least a 3.5 on the Analytical Writing section.
Once admitted on this basis, the student must take the following courses as an indicator of his/her scholarly work during the first 12 hours and maintain a 3.5 average GPA:

- **EDAS 8305 School Personnel Administration**
- **EDAS 8312 School Business Management and Facilities Planning**
- **EDFN 7304 Basic Statistics**
- **EDFN 8305 Intermediate Statistics or other required EDFN course based on the student’s Program of Study**

### Program Requirements

Students must develop a Program of Study (POS) with the consultation of their assigned advisor in the first semester of admittance into the program. The approved POS functions as an abiding document guiding students about the course of action (e.g., courses and internship) they need to take towards the completion of their degrees. The district level licensure program is embedded in the specialist program. The POS includes the following required courses that constitute the standards associated with that body of knowledge and the application of appropriate skills and dispositions to be a successful school administrator. These courses are not taken in any sequential order. Failure to progress satisfactorily will result in the removal of the candidate from the program.

### Program of Study

**Program co-requisite:**

**SPED 4301 The Exceptional Learner (or equivalent)**

### Educational Administration and Supervision (21 Credits)

- **EDAS 8303 Advanced Seminar in School Law and Ethics**
- **EDAS 8305 School Personnel Administration**
- **EDAS 8308 Central Office and Special Programs Administration**
- **EDAS 8311 The Superintendency**
- **EDAS 8312 School Business Management and Facilities Planning**
- **EDAS 8313 School and Community Relations**
- **EDAS 8317 Politics & Policy Analysis in Education**

### Educational Foundation Courses (6 Credits)

Students must take two of the courses below for a total of six credits during their Ed.S. Program of Study. Prior completion of any of the courses does not exempt students from taking a total of six credits. Students who have taken one or two of the courses listed must select an additional one or two EDFN courses to fulfill the six credits requirement.

- **EDFN 7303 Introduction to Education Research**
EDFN 7304 Basic Statistics
EDFN 7373 Qualitative Research Methods
EDFN 8305 Intermediate Statistics
EDFN 8306 Advanced Educational Research

Building Level Internship (3 Credits)
EDAS 8380 and 8381 Administrative Internship in Central Office

The culminating experience in the Ed.S. program is the development and presentation of an e-portfolio.

Please contact the program coordinator for additional information and current programs and requirements regarding licensure in the State of Arkansas.

Graduation Requirements

- Successful completion of an approved Program of Study.
- Successful presentation an approved Education Specialist Portfolio.
- Successful completion of Chalk and Wire requirements.

Licensure

Students must take the School Superintendent Assessment (SSA) for the superintendent’s license. To become a program/curriculum coordinator/director/administrator, the student must take the School Leadership Licensure Assessment (SLLA). Please contact the licensure program coordinator for additional information and current programs and requirements regarding licensure in the State of Arkansas.

Doctor of Education in Educational Administration and Supervision

Admissions Requirements

- Master’s or specialist degree from a regionally accredited institution
- Cumulative GPA of 3.5
- Graduate Record Exam (GRE) scores of at least 141 on the Verbal, 150 on the Quantitative, and 3.5 on the Analytical Writing sections
- If applicants do not have a valid teaching license, they must sign a document acknowledging that they understand that they are ineligible for state licensure for public school or district administration with a valid teaching license.
- Two letters of recommendation attesting to qualifications of the applicant for this advanced graduate study.
- A professional statement outlining goals and reasons for pursuing graduate study in administration and supervision.
- An academic writing sample.

Conditional Admission

In order to be eligible for conditional admission, an applicant must meet three out of the four following requirements:

- Master’s or Specialist’s degree from a regionally accredited institution with a cumulative GPA of 3.5. (on a 4.0 scale)
- Graduate Record Exam (GRE) score of at least 146 on the Verbal Scale.
- Graduate Record Exam (GRE) score of at least 141 on the Quantitative Scale.
- Graduate Record Exam (GRE) score of at least a 3.5 on the Analytical Writing section.

Once admitted on this basis, the student must take the following courses as an indicator of his/her scholarly work during the first 12 hours and maintain a 4.0 average GPA:

EDAS 8303 Advanced Seminar in School Law and Ethics
EDAS 8307 Sociocultural Foundations of Educational Policy
EDFN 8306 Advanced Research Methods and Techniques
EDFN 8308 Advanced Statistics

Advanced Standing Program

Applicants with an Educational Specialist degree (Ed.S.) in Educational Administration may be admitted to the doctoral program with an advanced standing. A maximum of 30 credit hours of specialist course work may be credited towards the 60 credit hours in the doctoral program of study. A student who is accepted with advanced standing must have completed a total of 96 post-baccalaureate semester hours of which no less than 30 hours must have been awarded by UALR. Crediting any specialist level hours towards advanced standing is made on an individual basis.

The following stipulations apply for advanced standing:

- Applicant must have a grade of B or greater in applicable specialist level courses;
- The specialist degree must be completed within the past five years, or Ed.S. degree with continuous service as a practicing administrator for the past five years in a position requiring a public school administration license; and
- If taken from another university, the specialist courses must be applicable to the UALR doctoral program in Education Administration and Supervision.

Students must satisfy admission and graduation requirements stated in the Academic Policies and Procedure Rules section of the Graduate Catalog and additional program requirements found under the College of Education and Health Professions section of this catalog. The candidate must
be able to demonstrate computer competency in course work and program requirements. The university reserves the right to modify policies and programs of study by supplying students with written notice of change.

Co-Emphasis Option
The doctoral program in Educational Administration and Supervision has a co-emphasis option in (a) Special Education and (b) Gifted Education. The co-emphasis serves as the “minor” within students’ concentration in Educational Administration and Supervision. The co-emphasis is designed for candidates desiring to administer these programs from the district or educational cooperative perspective. Students taking advantage of this option must have a graduate degree in the field of co-emphasis. Students pursuing a co-emphasis area should consult with the faculty member in the co-emphasis area to focus dissertation research in the co-emphasis area. Advising and dissertation chairing is provided by the program faculty. Students with a co-emphasis must develop a Program of Study upon their first semester of admission to the doctoral program. Students with a co-emphasis may take up to twelve credits of coursework in the co-emphasis area.

Program Requirements
Requirements for the Ed.D. in Educational Administration include the following courses that constitute the standards associated with the body of knowledge and the application of appropriate skills and dispositions to be a successful school administrator. These courses are not taken in any specified order; however, there is a logical sequence that may be beneficial to a candidate’s successful progression through the program. Students will be advised by program faculty as to the typical sequence of courses or best individualized progression.

Program of Study

Program co-requisite:
SPED 4301 The Exceptional Learner (or equivalent)

Concentration in Educational Administration and Supervision (18 credits)
EDAS 8303 Advanced Seminar in School Law and Ethics
EDAS 8307 Sociocultural Foundations of Educational Policies
EDAS 8317 Politics and Policy Analysis
EDAS 8320 Advanced Administrative Leadership Theory
EDAS 8330 Organizational System Analysis, Design, and Change
EDAS 9300 Seminar and Scholarly Writing

Electives or Co-emphasis Area (12 credits)
Approved electives in concentration area or courses in co-emphasis

Educational Foundations (15 credits)

EDFN 7373 Qualitative Research Methods
EDFN 8305 Intermediate Statistics
EDFN 8306 Advanced Research Methods and Techniques
EDFN 8308 Advanced Statistics
EDFN 8310 Applied Measurement in Research and Analysis

Dissertation (15 credits minimum)

EDAS 9390 Dissertation Colloquium
EDAS 9199-9999 Dissertation

Residency Plan

All requirements for the doctoral degree must be completed within seven consecutive years of enrollment in the program. Each Ed.D. student must file a residency plan for fulfilling residency requirement that demonstrates a commitment to the program through continuous and intensive enrollment at UALR. Students should consult with the doctoral program coordinator in the selection of a residency plan at least 20 class days before the end of the first semester of the planned residence period.

Residency hours must be in degree-related graduate courses. Requirement options are:

- Nine hours in each of two consecutive semesters, fall-spring or spring-fall.
- Nine hours in a spring or fall semester, and 9 hours in adjacent summer terms.
- 24 total hours in 18 consecutive months with at least six hours each enrollment period.
- At least six hours each in four consecutive fall and spring semesters with 30 total hours.

All residency plans require candidates to enroll for graduate hours every fall and spring semester during the entire course of the graduate program.

Advancement to Candidacy

Upon the completion of content course work and successfully passing the comprehensive examinations, students apply for the advancement to candidacy. Advancement is based on the student’s record, including a GPA of at least 3.5 and recommendation of advisor. Students not meeting these requirements will have an interview with the program faculty members, who will then recommend continuation, remediation and re-examination, or withdrawal.

The dissertation is begun after the student completes the coursework and passes the comprehensive examination. With the guidance of student’s advisor a Dissertation Committee is
formed. The Dissertation Committee is chaired by an EDAS full-time faculty member. A full research proposal is submitted to the Dissertation Committee, which consists of three Education faculty members, one from another UALR college, and one member from outside the university (if appropriate). All committee members must have an earned doctorate or appropriate terminal degree. Students proposing research on human subjects must comply with protocol prescribed by the Institutional Review Board (IRB). Contact the program coordinator for more information.

Students must enroll in dissertation hours and continue to enroll each semester until the dissertation is completed and approved.

Graduation Requirements

- Successful completion of an approved program of study
- Successful completion of the Chalk and Wire and aLAB requirements
- Passing the comprehensive exams successfully
- Successful completion and defense of the doctoral dissertation

Licensure

The Arkansas Department of Education requires a program of study in educational leadership for principal curriculum/program administrator, or superintendence administrator licensure. Licensure requirements may be coordinated with M.Ed. and Ed.S. requirements; the Ed.D. program is not aligned with the administrative licensure.

Applicants for licensure must take the School Leaders Licensure Assessment for licensure as a principal or the School Superintendent Assessment for the Superintendent’s License. To become a program/curriculum coordinator/director/administrator, the student must take the School Leadership Licensure Assessment. Please contact the licensure program coordinator for additional information and current programs and requirements regarding licensure in the State of Arkansas.

Graduate Certificate Programs

The Educational Administration and Supervision program includes three graduate certificates leading the state level licenses in educational leadership.

Graduate Certificate in Building Level Administration and Supervision

The Building Level Administration and Supervision certificate program is designed to meet the licensure requirements for principalship. The program includes a minimum 24 credit hours of graduate coursework and internship in educational administration.

Admissions Requirements

Admissions requirements are the same as those for the Master of Education degree in Educational
Administration and Supervision.

Program Requirements

Students must develop a Program of Study (POS) with the consultation of their assigned advisor in the first semester of admittance into the program.

Program of Study

Program co-requisite:

SPED 4301 The Exceptional Learner (or equivalent)
EDAS 7300 Foundations of Educational Administration
EDAS 7301 Administration & Assessment of Curricular Programs
EDAS 7302 School Finance and Human Resource Allocation
EDAS 7303 Education Law and Ethics
EDAS 7304 Supervision of Learning Services
EDAS 7305 The Principalship
EDAS 7380 Administrative Internship (First Semester)

Graduation Requirements

- Successful completion of an approved program of study.
- Successful completion of an electronic portfolio and other Chalk and Wire requirements.
- Four years of K-12 experience as a licensed classroom teacher, school counselor, or library media specialist.
- Submission of School Leader Licensure Assessment (SLLA) scores.

Licensure Examination

Arkansas Department of Education requires candidates seeking building level principalship license to take The School Leader Licensure Assessment (SLLA). The SLLA must be taken during the last semester of candidate’s program of study.

Graduate Certificate in Curriculum/Program Administration and Supervision

This graduate certificate program includes a minimum 24 credit hours of graduate coursework and internship in educational administration. The Curriculum/Program Administrator Licensure is defined by the Arkansas Department of Education as an individual that is responsible for:
(a) program development and administration and/or
(b) employment evaluation decisions. The license is granted to administer only the specialist area in Special Education, Gifted and Talented Education, Career and Technical Education, Content Area Specialist, Curriculum Specialist, and Adult Education Teaching.
Admissions Requirements

Admissions requirements are the same as those for the Educational Specialist degree in Educational Administration and Supervision.

Program Requirements

Students must develop a Program of Study (POS) with the consultation of their assigned advisor in the first semester of admittance into the program.

Program of Study

Program co-requisite:

- SPED 4301 The Exceptional Learner (or equivalent)
- EDAS 7301 Administration & Assessment of Curricular Programs
- EDAS 7303 Education Law and Ethics
- EDAS 7304 Supervision of Learning Services
- EDAS 8305 School Personnel Administration
- EDAS 8308 Central Office and Special Programs Administration
- EDAS 8313 School Community Relations
- EDAS 8381 Administrative Internship in the Central Office (Second Semester)

Graduation Requirements

- Successful completion of an approved program of study.
- Successful completion of an electronic portfolio and other Chalk and Wire requirements.
- Four years of K-12 experience as a licensed classroom teacher, school counselor, or library media specialist.
- Submission of School Leader Licensure Assessment (SLLA) scores.

Licensure Examination

Arkansas Department of Education requires candidates seeking Curriculum/Program Administrator License to take the School Leader Licensure Assessment (SLLA). The SLLA must be taken during the last semester of candidate’s program of study.

Graduate Certificate in Superintendency

This certificate program is designed to gain knowledge, skills, and dispositions to be a successful superintendent or other district level administrative positions. Arkansas Department of Education requires the receipt the candidate holding a Building Level Principalship or Curriculum/Program Administrator License.

Admissions Requirements
Admissions requirements are the same as those for the Educational Specialist degree in Educational Administration and Supervision.

Program Requirements
Students must develop a Program of Study (POS) with the consultation of their assigned advisor in the first semester of admittance into the program.

Program of Study

Program co-requisite:

SPED 4301 The Exceptional Learner (or equivalent)
EDAS 7302 School Finance and Human Resource Allocation
EDAS 8303 Advanced Seminar in School Law & Ethics
EDAS 8311 The Superintendency
EDAS 8312 School Business Management and Facilities Planning
EDAS 8313 School Community Relations
EDAS 8317 Politics and Policy Analysis
EDAS 8380 Administrative Internship in the Central Office (First Semester)
EDAS 8381 Administrative Internship in the Central Office (Second Semester)

Graduation Requirements

- Successful completion of an approved program of study.
- Successful completion of an electronic portfolio and other Chalk and Wire requirements.
- Four years of K-12 licensed experience.
- Submission of School Superintends Assessment (SSA) scores.

Licensure Examination
Arkansas Department of Education requires candidates seeking superintendent’s licensure to take The School Superintendent Assessment (SSA). The SSA must be taken during the last semester of candidate’s program of study.

Courses in Educational Administration and Supervision

**EDAS 7300 Foundations of Educational Administration**
Co-requisite: EDAS 7305 or 7307. This course will provide the student with an introduction to the organization and leadership theoretical knowledge base with practical application for school administrators.

**EDAS 7301 Administration and Assessment of Curricular Programs**
Prerequisite: EDAS 7300, 7302, 7303, 7305, 7304. An introduction to the concepts involved in the planning, organization, administration, and evaluation of curricular programs that are aligned with instructional and assessment techniques.

**EDAS 7302 School Finance and Human Resource Allocation**
A study of school finance concepts and the allocation of human resources within the education system.

**EDAS 7303 Education Law and Ethics**
Prerequisite: EDAS 7300; 7304; 7305. A study of legal concepts, issues relating to public school administration.

**EDAS 7304 Supervision of Learning Services**
Prerequisite: EDAS 7300 and 7305. This course will provide the student with acquisition of knowledge and skills relevant to administrative supervision and evaluation, with opportunities for application to practice in supervising learning services.

**EDAS 7305 The Principalship**
Co-requisite: EDAS 7300. This course will provide the student with the acquisition of knowledge and application of practice for administration of elementary schools including pre-K through early childhood grades.

**EDAS 7309 Building Coalitions in School and Community**
Prerequisites: EDAS 7300 Foundations of Educational Administration and EDAS 7305 or 7307 Elementary or Secondary Principalship. This course will provide the student with the knowledge and dispositions needed to facilitate and engage in collaborating with families and community members, respond to diverse community interests and needs, and mobilize community resources that promote the success of all children.

**EDAS 7310 Facilitating School Improvement**
Prerequisites: EDAS 7300 Foundations of Educational Administration and EDAS 7305 The Principalship. This course provides the student with the acquisition of knowledge and application of practice for analyzing, initiating, managing, and evaluating the process related to organizational change for school improvement.

**EDAS 7343 Workshop**
Prerequisites: EDAS 7300. (For prospective, practicing, administrators, supervisors). Experiences; development of special skills.

**EDAS 7380 Administrative Internship**
Prerequisites: EDAS 7300, 7302, 7303, 7304, 7305. This course will provide the student with significant opportunity to synthesize and apply knowledge, and develop and practice administrative skills in diverse settings under the direction of a school and/or school district administrative mentor and the university.
EDAS 7391 Independent Study in Educational Administration
Specific topic of student’s interest in educational administration.

EDAS 8300 Educational Specialist Seminar and Scholarly Writing
Education specialist concentration in preparation for advanced graduate studies with a focus on scholarly writing.

EDAS 8301 Group Dynamics and Behavior in Learning Organizations
Prerequisite: EDAS 7300. This course will provide the student with an introduction to theoretical knowledge and an understanding of implications related to group dynamics and behavior specific to team building and group collaboration for leaders in educational organizations.

EDAS 8303 Advanced Seminar in School Law and Ethics
Prerequisites: EDAS 7300 and 7303. The advanced study of legal and ethical concepts and issues related to executive management of educational institutions.

EDAS 8305 School Personnel Administration
Techniques, practices of administering school personnel programs.

EDAS 8307 Socio-Cultural Foundations of Educational Policies
Education as a socio-cultural phenomenon; fundamental differences in views of educational aims and values in a historical context.

EDAS 8308 Central Office and Special Programs Administration
Prerequisite: EDAS 7300. Board-administration relationships, organizational theory and practice, unique requirements of administering special programs in school districts, special schools, service centers; includes special, multicultural, gifted and talented education.

EDAS 8310 Directed Readings in Educational Administration
Prerequisite: consent of advisor. Current writings; evaluation of research base, assessment of authors’ hypotheses; knowledge of current research, theory.

EDAS 8311 The Superintendency
This course addresses the theory and practice of such areas as superintendent-board relation, strategic planning, professional negotiation, leadership style, and school climate from the superintendent’s perspective.

EDAS 8312 School Business Management/Facilities Planning
This course will provide the student with acquisition of knowledge and application of practice of school personnel administration.

EDAS 8313 School and Community Relations
The course presents principles and practices in developing and maintaining appropriate school/community relationships, opinion analysis communication processes, and decision making patterns.
EDAS 8314 Contemporary Issues and Trends in Educational Administration
The course will provide the student with the opportunity to investigate contemporary issues and trends related to educational administration and examine problems and solutions that are of current concern for school organizations.

EDAS 8315 Administrative Problem Analysis
A practical examination of the skills and knowledge needed to do problem analysis (problem finding, problem solving, problem sharing, participatory decision making, and leadership sharing) for school problem situations.

EDAS 8316 Collective Negotiations
The history of the public school labor movement in the United States and in the state of Arkansas, and the role of the educational Administrators in the negotiations and contract administration process.

EDAS 8317 Politics and Policy Analysis
Theory, practice of policy making; political influences brought to bear on policy issues in education.

EDAS 8320 Advanced Administrative Leadership Theory
An in-depth examination of theoretical concepts underpinning educational administration and the relationships of theories to current research and practice.

EDAS 8330 Organizational Systems Analysis, Design, and Change
An in-depth examination of theoretical concepts related to educational organizational structures and the study of conceptual models used for organizational analysis, design and organizational change in education.

EDAS 8380 Administrative Internship in the Central Office
Prerequisites: 24 graduate hours in educational administration. This course will provide the student with significant opportunity to synthesize and apply knowledge, and develop and practice administrative skills in diverse setting under the direction of a district/central office administrative mentor and the university.

EDAS 8381 Administrative Internship in the Central Office
Prerequisites: 24 graduate hours in educational administration and completion of EDAS 8380 Administrative Internship in the Central Office. This course will provide the student with significant opportunity to synthesize and apply knowledge, and develop and practice administrative skills in diverse setting under the direction of a district/central office administrative mentor and the university.

EDAS 9300 Doctoral Seminar and Scholarly Writing
Prerequisite: program admission. Orientation to doctoral studies, program procedures, dissertation issues, reflecting the expectations of the course standards consistent with the
requirements of the Arkansas Department of Education, the Interstate School Leaders Licensure Consortium, and the National Council for the Accreditation of Teacher Education.

**EDAS 9199-9999 Dissertation**
Prerequisites: completion of all course work, consent of instructor. Development of a doctoral-level dissertation.

**EDAS 9390 Dissertation Colloquium**
Development of various components of doctoral-level dissertation proposal.
Gifted and Talented Education

Dickinson Hall, Room 419, (501) 569-3267

Certificate | Master's

A Master of Education degree in Gifted, Creative, and Talented Education is offered. In addition to the master’s degree, there are two certificate programs, a graduate certificate in Gifted and Talented Education and a graduate certificate in Teaching Advanced Placement. For more information about these programs, see the descriptions that follow and visit the website. In addition to the master’s degree and certificate programs, an area of concentration in gifted education is available through the doctoral program in Educational Administration and Supervision. Contact Dr. Ann Robinson at aerobinson@ualr.edu for more information.

Graduate Certificate in Gifted and Talented Education

The graduate certificate in Gifted and Talented Education prepares students to complete their licensure in Gifted and Talented Education. It is a K-12 licensure attached to an existing license in general or special education.

Admission Requirements

Regular and Conditional Admission

All applicants must have:

- A valid teacher license. (Arkansas or other state), and
- Favorable recommendations from faculty in the program.

Regular Admission (additional requirements)

- Baccalaureate degree from a regionally accredited institution with a cumulative GPA of at least 2.75 (4.0 scale), or
- Grade point average of at least 3.0 for the last 60 hours of undergraduate courses, or
- Master’s degree from a regionally accredited institution with a cumulative GPA of at least 3.0.

Conditional Admission

- Baccalaureate degree from a regionally accredited institution; a cumulative undergraduate
GPA of no lower than 2.5; and a Graduate Record Exam (GRE) score of at least 370 on the Verbal Scale, 440 on the Quantitative Scale, and 4.5 on the Analytical Writing Scale, or
- Completion of at least 12 semester hours of graduate course work in another UALR graduate program or a graduate program at another regionally accredited college or university with a cumulative GPA of at least 3.0 and no grade lower than a B.

Program Requirements

The program of study includes four required courses:

GATE 7350 Teaching the Gifted and Talented
GATE 7355 Creativity Seminar
GATE 7357 Curriculum and Instruction in Gifted Education
GATE 7390 Supervised Practicum

Electives in Gifted Education

In addition, candidates select two electives in gifted education suited to their particular career goals to complete the program.

Graduation Requirements

Cumulative GPA of at least 3.0 on an approved program of study.

Master of Education in Gifted, Creative, and Talented Education

The Master of Education in Gifted, Creative, and Talented Education prepares students for professional careers as teachers of gifted and talented students and as administrators of programs for the gifted and talented in a variety of school and community settings. Elective courses and independently selected student projects encourage students to focus on an area of emphasis related to personal and professional goals. The curriculum is interdisciplinary.

Admission Requirements

Regular and Conditional Admission

All applicants must have:

- A valid teacher license. (Arkansas or other state), and
- Favorable recommendations from faculty in the program.
Regular Admission (additional requirements)

- Baccalaureate degree from a regionally accredited institution with a cumulative GPA of at least 2.75 (4.0 scale), or
- Grade point average of at least 3.0 for the last 60 hours of undergraduate courses, or
- Master’s degree from a regionally accredited institution with a cumulative GPA of at least 3.0.

Conditional Admission

- Baccalaureate degree from a regionally accredited institution; a cumulative undergraduate GPA of no lower than 2.5; and a Graduate Record Exam (GRE) score of at least 144 on the Verbal Scale, 141 on the Quantitative Scale, and 4.5 on the Analytical Writing Scale, or
- Completion of at least 12 semester hours of graduate course work in another UALR graduate program or graduate program from another regionally accredited college or university with a cumulative GPA of at least 3.0 and no grade lower than a B.

Program Requirements

The master’s degree requires 36 credit hours, including nine to 15 education core area hours; GATE 7350 Teaching the Gifted and Talented; GATE 7355 Creativity Seminar; GATE 7356 Current Issues in Research on Education of the Gifted and Talented; GATE 7357 Curriculum and Instruction in Gifted Education; six practicum hours, or three practicum and three internship hours; three additional approved gifted and talented hours; three to nine elective hours; and a written comprehensive examination. The program of study includes four required courses:

- GATE 7350 Teaching the Gifted and Talented
- GATE 7355 Creativity Seminar
- GATE 7357 Curriculum and Instruction in Gifted Education
- GATE 7390 Supervised Practicum

Electives in Gifted Education

In addition, candidates select two electives in gifted education suited to their particular career goals to complete the program.

Graduation Requirements

- Cumulative GPA of at least 3.0 on an approved program of study
- Passing of the comprehensive exam

Graduate Certificate in Teaching Advanced Placement

The graduate certificate in Teaching Advanced Placement is a 12-hour certificate. The purpose is to provide professional development to Pre-AP and AP teachers. Advanced Placement is a national
program of the College Board, which allows secondary students to acquire college-level credit for a freshman course through a rigorous externally administered examination jointly developed by colleges and secondary schools.

**Admission Requirements**

A 2.75 undergraduate GPA or a 3.0 in the last 60 undergraduate hours.

**Program Requirements**

The certificate program is a 12 credit hour program of 4 courses:

**GATE 7361 Advanced Placement for Talented Youth**
(overview of Advanced Placement program—course available at Summer Institute)

**GATE 7395 Internship**
(on-site internship in the home school focused on district demographics, needs analysis, equity and access issues, recruitment, staff development)

**GATE 7393 Content Specific Pedagogy in Pre-AP/AP**
(curriculum unit or scope/sequence plan for Pre-AP/AP teaching assignment) (course available at Summer Institute)

**GATE 7390 Supervised Practicum**
(supervised teaching experience in a Pre-AP/AP classroom)

**Graduation Requirements**

Cumulative GPA of at least 3.0 on an approved program of study.

**Courses in Teaching the Gifted and Talented**

**GATE 5102, 5202, 5302 Workshop**
Subjects vary. Offered on demand.

**GATE 7191, 7291, 7391 Independent Study**
Prerequisite: consent of advisor. Directed individual study of selected topics. Prerequisite: consent of instructor. Topics may include administration and supervision of gifted programs, specialized curriculum and technology, social and emotional needs of the gifted, program evaluation and performance assessment.

**GATE 7193, 7293, 7393 Special Topics**
Subjects vary. Offered on demand.

**GATE 7350 Teaching the Gifted and Talented**
Characteristics, needs of gifted and talented children, youths; identification procedures; types of
educational programs available; historical and philosophical foundations required of professionals in the field; history of the gifted child movement.

**GATE 7355 Creativity Seminar**  
Concepts of creativity; emphasis on relationships to education of gifted and talented students; theoretical, experimental aspects of the creative processes; their application to instruction.

**GATE 7193, 7293, 7393 Special Topics**  
Subjects vary. Offered on demand.

**GATE 7356 Current Issues in Research on Education of the Gifted and Talented**  
Prerequisite: GATE 7350. Recent theoretical, practical research; students assist in identification of applicable current research issues, conduct literature searches, synthesize results to develop appropriate position statements; may be repeated once for credit.

**GATE 7357 Curriculum and Instruction in Gifted Education**  
Prerequisite: GATE 7350. In-depth study of various instructional and curriculum models appropriate for use with gifted and talented students. Students will develop a curriculum project including a rationale, goals, objectives, learning activities, applications of technology and curriculum based assessment plans.

**GATE 7361 Advanced Placement for Talented Youth**  
Policies, procedures, and program and curriculum design for accelerative options. Includes principles of optimal match, curriculum articulation, vertical teaming and comparisons of national and international accelerative program models and assessments.

**GATE 7362 Administrative and Legal Issues in Gifted Education**  
Policies, procedures and practices for coordinating/administering programs for the gifted. Includes discussion of administrative issues of programming, identification of minorities, teacher selection, staff development, and program evaluation. Legal issues involved in gifted education, including due process, equity issues, and appropriate documentation are also discussed.

**GATE 7363 Affective Needs of the Gifted and Talented**  
Prerequisite: consent of the advisor. Students will explore the major theories, unique issues, and various intervention strategies concerning the affective needs of gifted students at all ages and stages of their development.

**GATE 7390 Supervised Practicum**  
Prerequisites: GATE 7350, 7357, consent of advisor. Practical application of content, instructional skills, competencies acquired in courses; may be repeated once for credit.

**GATE 7395 Internship**  
Prerequisites: 12 graduate hours, consent of advisor. Experience in the chosen specialization area under guidance of a practicing professional. Offered on demand.
GATE 7399 Thesis
Prerequisites: Educational Foundations 7303, 15 additional graduate education hours, consent of advisor. Formal research project; content determined with faculty committee chosen by student. May be repeated for six hours total.
Master of Arts in Higher Education and Doctor of Education

For more information about the master’s degree in Higher Education or the doctorate in Higher Education, visit the program’s website.

Master of Arts

The Master of Arts in Higher Education is designed for those individuals who are interested in entering or expanding their potential for attaining leadership positions in the field of higher education. Students choose from one of the concentration areas:

1. Two-Year College Teaching,
2. College Student Affairs,
3. Administration
4. Health Professions

The Two-Year College Teaching Concentration

The Two-Year College Teaching concentration is designed for those who are currently employed as faculty members in two-year colleges or those who aspire to such positions. It includes a minimum of 18 graduate hours in the teaching cognate field plus other required and elective courses that allow students to develop stronger faculty expertise.

College Student Affairs Concentration

The College Student Affairs concentration is designed for individuals who have special interest in college students and the higher education environments that affect their development. In addition, this program enables working professionals to increase their skills, knowledge, and abilities to compete for professional positions of increasing responsibility and scope. Program graduates are prepared to assume a wide range of administrative and professional roles in the fields of student life and student services.

Administration Concentration

The Administration concentration is tailored to those students aspiring to enter the field of higher education administration. The program enables these potential or currently employed students to develop the skills, knowledge, and abilities to compete for increasingly responsible professional
positions in higher education administration. Program graduates are prepared to assume a wide range of administrative and professional roles in the administration of colleges and universities.

Health Professions Concentration

The Health Professions concentration will provide the conceptual framework and skills for graduates to engage in the scholarship of teaching as related to the education of current and future pharmacists, physicians, nurses, health related professionals, and public health workers in Arkansas. Using an interdisciplinary combination of resources from the UALR Higher Education graduate program and UAMS as a nationally recognized academic health center within close proximity, students will learn to deliver high-quality health professions education and gain practical experience to link empirical research and evidence-based decision making to design more effective instructional practices and measure student learning.

Doctor of Education

UALR’s doctoral program in higher education (HIED) prepares students for a wide range of administrative and teaching roles in institutions of higher education. In addition to providing the necessary professional skills and knowledge, the faculty seeks to facilitate the development of students’ leadership potential and to inspire commitment and dedication to the field of higher and post-secondary education.

For more information about the master’s degrees in Higher education or the doctorate in higher education, visit the program’s website.

Master of Arts in Higher Education (all concentrations)

Admission Requirements

- Graduate Record Exam score of at least 900 (old GRE Score) / 290 (New GRE Score verbal and quantitative scores combined), or Miller Analogies Test score of at least 396. Tests must be taken within the last 5 years.
- Original transcripts from all colleges and universities previously attended reflecting an undergraduate grade point average of at least 3.0 on a 4.0 scale.
- Biographical Data Form.
- A two-page, typed and double-spaced explanation of the reasons for applying to the program and the goals the student expects to achieve.
- An interview with at least one faculty member from the program resulting in a favorable recommendation from that faculty member.

Conditional Admission

Candidates who have at least an overall GPA of 2.5 but only one criterion achieved (the required
test score or required GPA) may present a profile demonstrating progressively successful professional development experience beyond the bachelor’s degree and successfully complete the interview with the program faculty to be admitted conditionally to the program. Upon successful completion of six hours, the student may receive regular admission to the program.

Program Requirements

Concentration in Two-Year College Teaching

Students admitted to the program must complete 36 semester hours of graduate course work. Included will be at least 18 hours in the teaching cognate field, 12 hours in the program core, and six hours of elective courses selected in consultation with the faculty advisor. Students have three options for completing the degree:
1) Complete 36 hours of class work and a written comprehensive examination after class work has been completed or in the final semester of class work. The comprehensive examination consists of questions from the teaching cognate field and from the required courses in the program core;
2) Complete 36 hours of class work and six hours of academic thesis credit on an approved topic; or
3) Complete 36 hours of class work and six hours of applied research project credit on an approved topic.

Core Requirements

HIED 7300 Higher Education in the US: An Overview
HIED 8320 The Two-Year College in America
EDFN 7303 Introduction to Educational Research

Electives *

HIED 7302 Introduction to Program Evaluation
HIED 7331 College Instruction
HIED 7350 American College Student
HIED 7360 Practicum in College Student Affairs
HIED 8343 Legal Aspects of Higher Education
EDFN 7313 Learning Theories and Instruction Applications
EDFN 7314 Cognition and Instruction
LSTE 7302 Instructional Technology
LSTE 7310 Interactive Technology (Multi-media)
LSTE 7320 Advanced Instructional Teaching, or any other 7000 or 8000 HIED or EDFN course

* Other courses may be selected as electives in consultation with the faculty advisor.

Specialization (18 hours)
18 hours in the teaching cognate field

Capstone Experience (select one)

- Comprehensive Written Exam
- Academic Thesis (6 hours optional credit)
- Applied Research Project (6 hours optional credit)

Total program hours: 36

Concentration in College Student Affairs

The mission of the College Student Affairs program is to provide entry-level professional development to qualified individuals who have special interests in college students and the higher education environments that affect development. Graduates of the program are prepared to function effectively in a variety of positions in the field of College Student Affairs in two- and four-year institutions of higher education. In addition, this program enables working professionals to increase their skills, knowledge, and abilities, enabling them to compete for professional positions of increasing responsibility and scope. Program graduates are prepared to assume professional roles as coordinators, directors, and assistant directors in such specialty areas as academic advising centers, admissions, financial aid, career services, disability offices, Greek affairs, judicial affairs, international student programs, minority affairs, orientation programs, offices of residence life, student life/activities offices, and offices of alumni affairs.

The concentration in College Student Affairs is a 36-hour program, consisting of three components:

- **Foundational Studies**- the study of the foundations of higher education and student affairs
- **Professional Studies**- student development theory; student characteristics and effects of college on students, individual, and group interventions; organization and administration of student personnel services in higher education; and assessment, evaluation, and research
- **Supervised Practice**- consists of one or two semester-long internships/practical in two distinct areas

The program design follows the standards and guidelines for the Council for the Advancement of Standards in Higher Education (CAS) and meets the minimum curricular requirements set by Commission XII of the American College Personnel Association.

Higher Education Core Requirements

HIED 7300 Higher Education: An Overview
HIED 8320 The Two-Year College in America
EDFN 7303 Introduction to Research
Specialization Requirements (18 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HIED 7350</td>
<td>American College Student</td>
</tr>
<tr>
<td>HIED 7351</td>
<td>Foundations of Student Affairs</td>
</tr>
<tr>
<td>HIED 7352</td>
<td>Student Development Theory</td>
</tr>
<tr>
<td>HIED 7354</td>
<td>Student Affairs Programming and Management</td>
</tr>
<tr>
<td>HIED 7360</td>
<td>Practicum in College Student Affairs</td>
</tr>
<tr>
<td>CNSL 7308</td>
<td>Cross Cultural Counseling</td>
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<tr>
<td>HIED 8353</td>
<td>Assessment and Program Evaluation in Student Affairs</td>
</tr>
</tbody>
</table>

Electives (six hours)

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CNSL 7301</td>
<td>Theoretical Approach to Counseling</td>
</tr>
<tr>
<td>EDFN 7313</td>
<td>Learning Theories and Instructional Applications</td>
</tr>
<tr>
<td>EDFN 7314</td>
<td>Cognition and Instruction</td>
</tr>
<tr>
<td>EDFN 7304</td>
<td>Basic Statistics</td>
</tr>
<tr>
<td>HIED 7354</td>
<td>Programming and Management in Student Affairs Administration</td>
</tr>
<tr>
<td>HIED 8358</td>
<td>Capstone in Student Affairs</td>
</tr>
<tr>
<td>HIED 8356</td>
<td>Organization &amp; Leadership CSA &amp; Master</td>
</tr>
</tbody>
</table>

Capstone Experience (selective)

- Comprehensive Written Exam
- Thesis (six hour optional credit)
- Portfolio

**Total Program Hours: 36**

Concentration in Administration

The mission of the Higher Education Administration concentration is to provide academic preparation and professional development to qualified individuals for entry-level positions in administrative leadership in public and private institutions and agencies of higher and post-secondary education. Students will gain knowledge, skills, and competencies essential to serving as leaders in a variety of education settings.

Curriculum

Specialization (18 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HIED 7351</td>
<td>Foundations in College Student Affairs</td>
</tr>
<tr>
<td>HIED 8321</td>
<td>Organization &amp; Admin of Two-Year Colleges</td>
</tr>
<tr>
<td>HIED 8322</td>
<td>Issues and challenges in Two-Year College Leadership</td>
</tr>
<tr>
<td>HIED 7331</td>
<td>College Instruction</td>
</tr>
<tr>
<td>HIED 7360</td>
<td>Practicum in Higher Education</td>
</tr>
</tbody>
</table>
LSTE 7330 Distance Learning Systems Technology

Electives (six hours)

HIED 7302 Introduction to Program Evaluation
HIED 7350 American College Student
HIED 8343 Legal Aspects of Higher Education
HIED 8340 Organizational Behavior and Post-secondary Education
HIED 8341 Financing of colleges and Universities

Capstone Course (three hours)

HIED 8342 Governance and Policy & Masters comprehensive exam

**Total core, specialization, electives, and capstone course & exam =36 hours**

Thesis or Project Committees

Students who elect the Academic Thesis or Applied Research Project options must select a supervising committee consisting of three people to oversee and approve their thesis or project work. The committee must consist of one of the following:

- One member as chair who is a member of the Higher Education Program faculty;
- One member from the faculty of the College of Education who is not a member of the Higher Education Program faculty;
- One faculty member from outside the College of Education and Health Professions.

Transfer Courses

In some cases, students may wish to include in their programs a teaching cognate that is not offered by UALR. In those cases, it may be possible for students to earn those hours at another university where the cognate is offered and transfer them to UALR. Students may transfer as many as one-half of the classes required in the M.A. program. This means that no more than 18 of the 36 hours required for the program may be transferred from another university.

In order to transfer courses to UALR, grades of A or B must have been earned at a regionally accredited university. If the hours in the teaching cognate field were earned more than five years prior to enrolling in the UALR program, students are required to complete at least six additional hours in the cognate as part of the MA program.

Doctor of Education

The program is designed as a highly personalized experience, focusing on each student’s specific needs and aspirations. It provides a thorough grounding in the major areas of knowledge relating
to higher education as a field of study as well as a broad familiarity with the theory, practice, and scholarship of higher education.

The curriculum may include both cognitive and experiential components as well as structured and independent course work. A strong interdisciplinary element provides flexibility and a broad knowledge base. In many instances, students will complete some of their course work in other fields within or outside the Division of Education.

Admission Requirements

Admission is based on a total profile of the applicant’s educational and professional background. It is expected that applicants have professional work experience. GRE requirements reflect the November 2011 Guide of the Use of Scores. Unconditional admission requirements include the following:

- Master’s degree or equivalent in a related field from a regionally accredited institution, official transcripts required
- Cumulative GPA of 3.5
- GRE scores:
  - A combined score of 1000 for the verbal and quantitative sections on the GRE. This means that if an applicant scores a 450 on either section, he/she must score a minimum of 550 on the other section.
  - A score of at least 450 (old GRE score)/150 (new GRE score) on the Verbal section is required.
  - A score of at least 450 (old GRE score)/150 (new GRE score) on the Quantitative section is required.
  - A score of at least 4.5 on the Analytical Writing section.
- Three years of successful professional experience, or equivalent, in an area related to the degree program
- Biographical data form
- Interview with and approval of the Higher Education faculty

Conditional Admission

Conditional admission requirements include the following:

1. A master’s degree with a graduate GPA of 3.5 or above (required standard);
2. A score of 400 (old GRE score)/146 (new GRE score) or above on the Verbal section of the Graduate Record Examination (GRE);
3. A score of 450 (old GRE score)/141 (new GRE score) or above on the Quantitative section of the GRE;
4. A score of 3.5 or above on the Analytical Writing section of the GRE.

To succeed in graduate-level work, research or publications may be required. Program faculty may request documentation, including the following: official transcripts from all post-master’s
studies, successful graduate course work from an accredited university, examples of academic and professional work, writing samples, statements of purpose, and letters of support from faculty members or others familiar with the applicant’s capability for doctoral-level work.

The Higher Education Program Admissions Committee will review and evaluate the documentation. Conditionally admitted students will be allowed to enroll in up to 12 semester hours. Upon completion of 12 semester hours in the program, the Admissions Committee will review the work completed up to that point by the applicant as part of the overall admissions application to determine if the student will be granted regular admission to the program. Changing admission to regular status will be contingent upon the student successfully completing course work to be determined with Higher Education Program Advisor with a minimum 3.5 GPA.

Conditional admission does not guarantee regular admission to the Ed.D. program in Higher Education. Students who are not granted regular admission to the doctoral program will not be permitted to enroll in Higher Education courses beyond the prescribed 12 hours of conditionally admitted course work, but may be allowed admission to the M.A. in Higher Education.

Program Requirements

The higher education doctorate degree requires a minimum of 99 graduate hours, usually 63 to 69 hours beyond the 36-hour master’s degree. (Most students will complete more than the minimum 99 hours.) The requirements include 21 core hours (research competencies, education and higher education competencies), 27 specialization area hours, 15 dissertation hours, and a comprehensive examination as well as fulfillment of the residency requirement. Students develop, with their committees, a program of study that addresses their individual interests and needs.

Students are expected to develop a thorough grounding in the major divisions of knowledge relating to higher education as a field of study (e.g., history, administration, law, student affairs). In addition, they develop a broad familiarity with the theory, practice, and scholarship of higher education.

The written comprehensive exam is taken after completion or during the final semester of course work and is followed by an oral comprehensive exam. Following successful completion of both components of the comprehensive exam, students develop a proposal for their dissertation. The required dissertation and oral defense develops research capacity and a working familiarity with research in the student’s specialization area. Research competency and literacy are demonstrated in the design and conduct of a study that makes a substantive contribution to the field.

Residency Plan

All requirements for the doctoral degree must be completed within seven consecutive years of enrollment in the program. Each Ed.D. student must file a residency plan for fulfilling a residence requirement that demonstrates a commitment to the program through continuous and intensive
enrollment at UALR.

Students consult with their advisors to choose one of three residency options at least twenty class days before the end of the first semester of the planned residence period. Residency hours must be in degree-related graduate courses. Requirement options are:

- Nine hours in each of two consecutive semesters, fall-spring or spring-fall
- Nine hours in a spring or fall semester and nine hours in adjacent summer terms
- Six hours minimum in each enrollment period over four consecutive semesters with 24 total hours over 24 consecutive months (summer enrollment is not required but if it is included the student must enroll in at least six hours of course credit.)

Education/Higher Education Core

HIED 8301 History and Philosophy of Higher Education
HIED 8303 Leadership Theories in Higher Education
HIED 8399 Dissertation Seminar

Research Core

EDFN 7304 Basic Statistics (students without a research course in their Master’s program must complete Educational Foundations 7303 first)
EDFN 8305 Intermediate Statistics
EDFN 8306 Advanced Research Methods and Techniques
EDFN 7373 Qualitative Research Methods

Doctoral Concentration Areas and Requirements

Concentrations are offered in higher education administration, student affairs administration, two-year college leadership, and faculty leadership. Each student will be assigned to work with an advisor to design a plan of study that reflects previous studies and professional experience, while focusing on discrete areas of study that serve the student’s intellectual and professional needs and interests.

Requirements for Administration Concentration

Area of Specialization: 27 hours

HIED 8340 Organizational Behavior in Higher and Post-secondary Education
HIED 8341 Financing of Colleges and Universities
HIED 8342 Governance and Policy Making in Higher Education
HIED 8343 Legal Aspects of Higher Education
Electives: Six hours of general electives
Electives: Nine hours (Three hours each from each of the other three specialty areas)
Dissertation: 15 hours

Requirements for Two-Year College Leadership Concentration

Area of Specialization: 27 hours

HIED 8320 The Two-Year College in America
HIED 8321 Organization and Administration of Two-Year Colleges
HIED 8322 Issues and Challenges in Two-Year College Leadership
HIED 8340 Organizational Behavior in Higher and Post-secondary Education
HIED 8341 Financing of Colleges and Universities
HIED 8342 Governance and Policy Making in Higher Education
HIED 8343 Legal Aspects of Higher Education
Electives: Six hours

Dissertation: 15 hours

Requirements for Student Affairs Administration Concentration

Prerequisites (if master’s degree is not in Student Affairs)

HIED 7351 Foundations of Student Affairs
HIED 7352 Student Development Theory

Area of Specialization: 27 hours

HIED 8343 Legal Aspects of Higher Education
HIED 8345/ HIED 8357 Seminar: Topic in Student Affairs Administration
HIED 8350 The American College Student
HIED 8353 Assessment and Program Evaluation
HIED 8358 Capstone Seminar in Student Affairs
Electives: Nine hours (Three hours each from each of the other three specialty areas)
Electives: Three hours of general electives

Dissertation: 15 hours

Requirements for Faculty Leadership Concentration

Area of Specialization: 27 hours

HIED 8330 College Teaching Problems and Issues
HIED 8332 Curriculum Design in Higher Education
HIED 8341 Financing of Colleges and Universities
HIED 8342 Governance and Policy Making in Higher Education
Cognate courses: Six hours (equivalent to UALR College of Education 7000-level or 8000-level courses)
Electives: Nine hours (7000-level or 8000-level courses in Higher Education or Educational Foundations)

Dissertation: 15 hours

Graduation Requirements

- Cumulative GPA of at least 3.0 on an approved program of study as outlined above
- Successfully passing the comprehensive examinations
- Successful completion and oral defense of an acceptable dissertation

Courses in Higher Education

**HIED 7300 Higher Education in the United States: An Overview**
Prerequisite: graduate status. (Serves as introduction to the master’s program and is a requirement for the doctoral program for students lacking background and experience in higher education.) American system of higher education; problems, issues, trends.

**HIED 7331 College Instruction**
Prerequisite: graduate status. Capstone college teaching experience. This course addresses the theory and practice of effective college teaching. Students examine learning styles, their assessment, and how to accommodate them in the classroom. Philosophies and methods of the professorate are studied.

**HIED 7347 Practicum: Health Professions Teaching/Learning**
Prerequisites: HIED 7331, HIED 8332, EDFN 7313, EDFN 7370. Independent supervised teaching or research practicum for students in the Health Professions Education MA program concentration. Students will assist in teaching a credit-bearing course in the Health Professions or will complete and disseminate an original empirical research study on Health Professions education.

**HIED 7348 Internship: Health Professions Teaching/Learning**
Prerequisites: HIED 7331, HIED 8332, EDFN 7313, EDFN 7370. Independent supervised teaching internship for students in the Health Professions Education MA program concentration. Students will have primary instructional responsibility for a credit-bearing course in the Health Professions and complete a teaching portfolio.

**HIED 7349 Thesis: Health Professions Teaching/Learning**
Prerequisite: Completion of 3 hours of HIED degree requirement or consent of instructor. Masters students will demonstrate theoretical knowledge and methods of education research to complete and defend an original thesis project.
HIED 7351 Foundations in College Student Affairs
Introduction to the student personnel profession/student affairs profession, the roles and functions of professionals in the field, the populations served, the college and university settings where the profession is practiced, the skills and competencies necessary to be a professional in the field, and awareness of current issues regarding students and student personnel in higher education.

HIED 7352 Student Development Theory
Introduction to the theoretical framework that serves as a basis for the professional practice of student affairs in higher education. Developmental orientation that emphasizes the value and importance of individual major theories of student development, the role of student developmental theoretical perspectives.

HIED 7354 Programming and Management in Student Affairs Administration
A capstone experience for the master’s track in student affairs. A forum for integration, synthesis, and application. Emphasis in clarifying student development for students and for a campus. Examines new issues and concepts (e.g. legal issues, budget and finance). Integrates previous course work and practical experiences.

HIED 7360 Practicum in Higher Education
Prerequisites: HIED 7300. Supervised professional experience in the various offices/ agencies that comprise a total program of student personnel services within a post-secondary, college, or university setting. Integrates course work with experience in a prearranged, structured setting in any number of student affairs/student service offices/agencies, two-year college instructional settings, or two- or four-year college or university administrative settings. Students complete either 150 or 300 hours of experience under both faculty and on-site supervision.

HIED 8145-8645 Seminar
Prerequisite: graduate status. Specialized study of areas of significance in higher education; possible topics include student financial assistance, admission and records, academic advisement, residence life, institutional research, student center organizations, development and fundraising, current issues, etc.

HIED 8160, 8260, 8360 Practicum in Higher Education
Prerequisite: graduate status, consent of advisor and practicum supervisor. Supervised work or study in an area the student has studied.

HIED 8161, 8261, 8361 Workshop
Prerequisite: consent of instructor. Practical, concentrated (from a few hours to a week) consideration of selected topics of current interest to practitioners.

HIED 8320 The Two-Year College in America
Prerequisite: graduate status. An overview of the two-year college. Topics include the history and philosophy of the two-year college movement, students, curriculum, state and local campus
governance, teaching, student personnel work, finance and issues, problems and trends.

HIED 8321 Organization and Administration of Two-Year Colleges
Prerequisite: graduate status. Examination of the organizational patterns of and management practices within two-year colleges. Topics include leadership, organizational theories, and relations with external agencies; the operations of various administrative units such as the president’s office, business affairs, student services, instruction, personnel, and institutional research; and the management of college functions, such as recruitment assessment, planning, and performance appraisal.

HIED 8322 Issues and Challenges in Two-Year College Leadership
Prerequisite: graduate status. Examines current issues facing the contemporary two-year college and the challenges that these issues present to two-year college leaders. Focuses attention on the analysis of an issue, the assessment of the potential impact of an issue, and the incorporation of information generated from issue analysis into institutional planning processes.

HIED 8330 College Teaching: Problems and Issues
Prerequisite: EDFN 7373 and EDFN 8306. Examines faculty roles as teachers, scholars, and researchers; explores the existing theory, research, and practice on college teaching and applies it to problems and issues in college teaching; discusses contextual issues influencing teaching and learning.

HIED 8332 Curriculum Design in Higher Education
Prerequisite: EDFN 7373 and EDFN 8306. This course will address curriculum issues in a variety of post-secondary settings, and the primary focus is undergraduate programs, including liberal, general, occupational, and professional education. The course is designed for faculty, administrators, and researchers who are interested in curriculum planning, evaluation and revision, instructional design, or academic staffing.

HIED 8333 College and University Faculty
Prerequisite: EDFN 7373 and EDFN 8306. Exploration of the existing data and theory on college and university faculty. A chronological approach in considering how recruitment to the profession occurs, the socialization process is involved, the preparation of future professors takes place, and similar topics.

HIED 8340 Organizational Behavior in Higher & Post-Secondary Education
Prerequisite: graduate status. Management, leadership, administration of higher education institutions; literature about the administration of higher learning; may focus individual study on two- or four-year public or private institutions.

HIED 8341 Financing of Colleges and Universities
Prerequisite: EDFN 8306 and EDFN 7373. Processes, policies, and issues in higher education funding; funding sources and use, revenue and expenditure categories; budget priorities, development and analysis, and financial management reporting; roles and authorities of
institutions, states, and federal government in financing higher education.

**HIED 8342 Governance and Policy Making in Higher Education**
Prerequisite: EDFN 8306 and EDFN 7373. Shared governance, roles, and authorities of internal and external governance participants; policy analysis and development, policy making for higher education at the institutional, state, and federal levels; unique character of lay governance in the roles and authorities of lay governing and coordinating boards in the U.S.

**HIED 8343 Legal Aspects of Higher Education**
Prerequisite: graduate status. Legal rights, responsibilities of faculty, students, staff, administrators, governing board members.

**HIED 8344 Legal Aspects of Teaching**
Prerequisite: graduate status. Examines the legal issues of interest to higher education faculty members. Areas of focus include academic integrity, student rights and responsibilities, intellectual property rights, fair employment, due process, tenure, affirmative action, and legal liability. Court cases, statues, the Constitution, and regulations serve as the basis for discussion.

**HIED 8350 The American College Student**
Examination of the nature and characteristics of contemporary and historical college student populations in American post-secondary and higher education. Explores the effects of different institutional environments on student outcomes and psychological development, as well as a variety of research methods.

**HIED 8353 Assessment and Program Evaluation in Student Affairs**
An overview of evaluation as an inquiry process and will examine the philosophy and practice of assessment and evaluation in higher education. Examines the usefulness and appropriateness of various program evaluation methodologies (quantitative and qualitative), theories of evaluation practice and use, and theories of valuing in college student affairs. Explores these and other issues shaping contemporary evaluation practices.

**HIED 8358 Capstone Seminar in Student Affairs**
Enhances student understanding of administrative leadership through the examination of questions and issues related to the management of student affairs. Broadens student perspective through discussion and debate. Increases the degree to which student experiences, knowledge, and values are effectively integrated, and to allow students to personally examine ideas, test assumptions, express opinions, and recognize the accountability associated with presentation.

**HIED 8370 Policy and Politics in Higher Education**
Prerequisites: doctoral Status. This course focuses on the relationship between higher education institutions and public policy. Issues to be addressed include legal, academic, financial, and governance accountability to local, state, federal, and other external agencies. Students will consider examples of how the political process impacts higher education policy making and how higher education institutions influence the political process.
**HIED 8390 Research Practicum in Higher Education**
Prerequisites: HIED 8311, EDFN 8383 and EDFN 8308. Supervised independent study for students in the Higher Education doctoral program. Students will conduct an original empirical research study, submit a manuscript for major peer-reviewed journal review, and prepare a research proposal for national conference presentation.

**HIED 8397, 8697 Internship**
Prerequisite: graduate status, consent of instructor and internship supervisor. Supervised field experience in college or university setting provides work experience putting theory into practice.

**HIED 8399 Dissertation Seminar**
Prerequisite: consent of instructor, student’s doctoral chair. (Open only to doctoral students.) Formulation of topic for dissertation research; development of dissertation prospectus in form satisfactory to student’s doctoral committee.

**HIED 9199-9999 Dissertation**
Prerequisites: consent of committee chair. Development of doctoral-level research paper or field-based project.

**HIED 9390 Dissertation Colloquium**
Prerequisite: dissertation prospectus approved. Development of various components of doctoral-level dissertation.
Learning Systems Technology

Dickinson Hall, Room 419, (501) 569-3267

Master of Education in Learning Systems Technology

The Master of Education in Learning Systems Technology (LSTE) program’s mission is to prepare instructional designers and learning scientists for careers in public schools, community colleges, higher education institutions, business, industry, government, military, and medical settings or facilities. Specifically, the program enables instructional designers to act in teaching and administrative roles in order to analyze problems and apply solutions for learning, including planning, preparation, implementation, evaluation, and management. Aspects of the program include the psychology and development of diverse learners, learning resources development and application, and societal concerns pertaining to instructional technology.

The program includes three major areas in instructional technology:

1. Instructional program development: consideration of the broad problem of developing a complete system of instruction, a total application of technology, and mediated instruction to facilitate learning;
2. Educational technology product development: the practice of creating packages of mediated instruction and the translation of specific instructional objectives into concrete items that facilitate learning; and
3. Educational technology management: an investigation of support services for both instructor and learner; considers principally a “responsive” service; includes aspects of location, selection, acquisition, organization, storage, retrieval, distribution, and maintenance of both materials and devices. For more information visit [LSTE program](#).

Admissions Requirements

All applicants for both regular and conditional admission must submit a Biographical Data Form.

Regular Admission (additional requirements)

- Baccalaureate degree from a regionally accredited institution with a cumulative grade point average of at least 3.0 (4.0 scale), or
- GPA of at least 3.25 for the last 60 hours of undergraduate courses, or
- Master’s degree from a regionally accredited institution with a cumulative grade point average of at least 3.25.
Conditional Admission (additional requirements)

- Baccalaureate degree from a regionally accredited institution; a cumulative undergraduate GPA of no lower than 2.75, or
- Completion of at least 9 semester hours of graduate course work in another UALR graduate program or a graduate program from another accredited college or university with a cumulative GPA of at least 3.0.

Program Requirements

Performance Requirements

- A minimum score of B is required for each of the required courses in the program study.
- A required course with a grade of C does not satisfy the degree requirement and must be repeated.
- All students must maintain a cumulative GPA of 3.00 to be in good standing in the program.
  - Those not maintaining at least a GPA of 3.00 will be placed on academic probation.
  - Students who fail to remove the probationary status by raising their cumulative GPA to 3.00 or better within the next 12 credit hours are subject to dismissal from the LSTE program.
- Deviation from the degree plan requires the approval of the LSTE coordinator.

Educational Foundations Required Courses (Nine hours)

EDFN 7313 Learning Theory and Instructional Applications
EDFN 7314 Cognition and Instruction
EDFN 7370 Educational Assessment (Required beginning spring 2014)

Learning Systems Technology Required Courses (21 hours)

LSTE 7303 Foundations of eLearning
LSTE 7304 eLearning Environments and Education
LSTE 7307 Research in Human-Technology Interaction
LSTE 7311 Introduction to Instructional Design
LSTE 7315 Instructional Design: Accessible and Universal
LSTE 7317 Mobile Learning Environments
LSTE 7323 Advanced Instructional Design

Possible electives chosen from the following: (Six hours)

LSTE 7310 Systematic Integration of Technology in Learning Systems
LSTE 7313 Perception, Meaning, and Messages
LSTE 7316 Applied Theories of Instructional Design
LSTE 7329 Trends in eLearning
LSTE 7350 Internship
EDFN 7302 Introduction to Program Evaluation
OR EDFN 7303 Introduction to Educational Research
EDFN 7304 Basic Statistics
EDFN 7308 Multicultural Education Trends and Issues
EDFN 7330 Human Development
RHET 5302 Technical Reports
RHET 5304 Technical Style and Editing
RHET 5375 Grant Writing
Other (requires prior approval by the advisor)

Graduation Requirements

- Successful completion of approved program of study
- Passing the comprehensive exam or successfully defending a portfolio presentation

Courses in Learning Systems Technology

**LSTE 7101, 7200, 7300 Independent Study**
Designed to be variable in credit and emphasis depending on the interests of the learner and the expertise of the faculty member in the general area of Learning Systems Technology, primarily devoted to subjects of an evolving nature.

**LSTE 7101, 7201, 7301 Workshop in Learning Systems Technology**
To meet special needs of students. Offered on demand

**LSTE 7303 Foundations of eLearning**
LSTE 7303 is the foundational course that explores the connections between educational psychology and the pedagogy of effective instruction in society. Instructional interventions and their potential improvement of society through the application of eLearning tools are surveyed.

**LSTE 7304 eLearning Environment and Education**
LSTE 7304 explores technology-based eLearning environments within a framework that aligns purpose, pedagogy, and assessment practices. Candidates will learn how to identify the correct technological tools based on the learning activity. Develop pedagogical practices that support the use of the tool(s) identified, and align assessment practices that correctly measure the desired learning outcomes.

**LSTE 7305 Survey of Computer-based Learning Systems**
Prerequisite: LSTE 7303. Applications of microcomputers in the educational setting; includes parameters of microcomputers, standard and predicted uses in instruction. Offered all terms.

**LSTE 7306 Digital Photography and Learning Systems**
Prerequisite: LSTE 7303. Concepts, theoretical foundations for production, use of still
photography in the educational process; students photograph, process, arrange pictures for instructional applications. Three hours lecture/demonstration. Offered in fall and summer I.

**LSTE 7307 Research in Human-Technology Interaction**
Candidates will participate in a broad graduate-level introductory course of HTI research. The course begins with seminal work on interactive systems and moves through current and future research areas in interaction techniques and the design, prototyping, and evaluation of user interfaces.

**LSTE 7308 Digital Television and Learning Systems**
Prerequisite: LSTE 7306. Concepts, theoretical foundations for production, use of instructional television, videotape in the educational process; students write, produce five instructional units in video delivery system format. Three hours lecture/demonstration. Offered in spring and summer II.

**LSTE 7309 Administration of Learning Systems Technology**
Prerequisites: LSTE 7303, 7305, 7310, 7320. Problems, responsibilities in establishment, maintenance, improvement of educational media services in public schools, colleges, businesses, industries, medical professions. Offered in spring and summer II.

**LSTE 7310 Systematic Integration of Technology in Learning Systems**
Prerequisites: LSTE 7303, 7305; EDFN 7313, 7314. Production, application of interactive instructional units where the microcomputer is the controlling medium for such peripherals as laser disk players and CD-ROM units.

**LSTE 7311 Introduction to Instructional Design**
Prerequisites: LSTE 7303 and 7304 with grades of B or better. This course introduces students to the fundamentals of instructional design through a theory to practice model of education. Candidates will learn the systems approach to instructional design, the basics of this design process, and its conceptual framework. A project-based elearning approach will give students the opportunity to apply a systems approach to instructional design and experience a full cycle of the decision-making process.

**LSTE 7313 Perception, Meaning, and Messages**
Prerequisite: LSTE 7311. This course focuses on introducing candidates to the basics of message design through perception and learning theory, as well as computer mediated communication. This course engages candidates in a critical and analytical exploration of the media and how its messages influence American culture and society. Candidates will study such theories as motivation and perception in order to be able to design appropriate instructional messages through various forms of media such as film, visual art, television, music, mass media, web-based media, and literature. The course is designed to provide candidates an opportunity to critique, design, and evaluate digital media through case-study analysis.

**LSTE 7315 Instructional Design: Accessible and Universal**
Prerequisite: LSTE 7311. This course focuses on the creation of structures and programs that can be used by all people. This course provides an introduction to the concept of Universal Design and presents the history, principles, and progress of Universal Design as it applies to the designer, developer, and consumer. Candidates will participate in a project-based learning approach that requires the design of instructional software, which illustrates the definition of Universal Design, its major concepts, and guidelines for each of its principles.

**LSTE 7316 Applied Theories of Instructional Design**
Prerequisite: LSTE 7311. This course emphasizes the translation theory of instructional systems design. This class integrates foundational theories of instructional design with systems theory, communication theory, learning theories, and instructional theories in the development of technology-based learning materials.

**LSTE 7317 Mobile Learning Environments**
Candidates in LSTE 7317 develop technical, instructional, and design skills to create effective interactive educational programs for a mobile learning environment. The course applies basic principles of mobile learning to just-in-time training environments that provide ample opportunity for team building and collaboration. Management, development, and creation of mobile learning content are discussed.

**LSTE 7320 Intranet and Internet Learning Systems**
Prerequisite: LSTE 7303, 7305. New media technologies, application to education; emphasis on instructional use of cable television, videotext, facsimile, satellites, optical disc, interactive video, microforms, data bases. Offered in fall and summer.

**LSTE 7325 Assessment in Learning Systems Technology**
Prerequisites: LSTE 7303, EDFN 7313, EDFN 7314. This course presents a variety of strategies for assessment of learning by examining the purposes for collecting student achievement data, measurement, concerns in technology rich environments, and practical interpretations and applications of assessment data.

**LSTE 7329 Trends in eLearning**
Prerequisite: LSTE 7311. LSTE 7329 explores trends in eLearning for instructional purposes, including but not limited to gaming and simulations. The class includes the analysis of the appropriate kinds of activities to support different learning outcomes and the demonstration and discussion of how instruction and assessments align.

**LSTE 7330 Distance Learning Systems Technology**
Prerequisites: LSTE 7303, LSTE 7305, EDFN 7313, EDFN 7314. This course presents the current choices in what is termed “distance education.” The creation of at least one course to be delivered via one of the major distance learning strategies will be required.

**LSTE 7350 Internship**
Prerequisites: all required program courses. Students work 150 clock hours at a professional
instructional media site (public school, industry, business, etc.) for practical on-the-job experiences in the three major specialty areas of instructional program development, media product development, and media management.

**LSTE 7360 Seminar**
Prerequisite: LSTE 7303. Trends, problems of current, emerging technology pertaining to instruction. Offered on demand.
Master of Education in Curriculum and Instruction

The Master’s of Education in Curriculum and Instruction is designed for licensed teachers. The program is individualized to meet teachers’ personal professional goals. In Reflective Teaching, teachers define their goals and assess their current level of competence. In addition, the program is aligned with the National Board Certification. Requirements for the degree include a minimum of 36 hours and culminate in a lab digital portfolio. Students must satisfy graduation requirements stated in the Academic Regulations section of the Graduate Bulletin and programs found in the College of Education section. The university reserves the right to modify policies and programs of study by supplying students with written notices of changes.

Admission Requirements

All applicants must meet the following requirements:

- Baccalaureate degree from a regionally accredited institution with a cumulative GPA of at least 2.75 (4.0 scale), or
- Grade point average of 3.0 for the last 60 hours of undergraduate courses, or
- Grade point average of 3.0 in the content major, or
- Master’s degree from a regionally accredited institution with a cumulative GPA of at least a 3.0
- Hold or be qualified to hold a valid teaching license

Conditional Admission

- Baccalaureate degree from a regionally accredited institution; a cumulative undergraduate GPA of no lower than 2.5; and a Graduate Record Exam (GRE) score of at least 144 on the Verbal Scale, 141 on the Quantitative Scale, and 3.5 on the Analytical Writing Scale, or
- Completion of at least 12 semester hours of graduate course work in another UALR graduate program or graduate program from another regionally accredited college or university with a cumulative GPA of at least 3.0 and no grade lower than a B.

Program Requirements

Professional Education Requirements (12 hours)
TCED 7303 Reflective Teaching
EDFN 7303 Intro to Research in Education (or approved discipline-based educational research course)
SCED 7304 Action Research Project
TCED 7301 Curriculum: History and Issues

Competence Requirements (12 – 15 hours)
Candidates are required to demonstrate competence in the areas listed below:

- Competence to students and their learning (three); EDFN 7313 or EDFN 7330
- Mastery of content and content pedagogy: see concentration
- Managing and monitoring student learning (six): EDFN 7370 and TCED 7350 Integrating Technology in PK-12 Education

Required Concentration(s) (12 hours)
Candidates are required to complete a concentration of at least 12 hours in a content area, an area of education, or in an approved interdisciplinary area.

Graduation Requirements
- Cumulative GPA of at least 3.0 in an approved program of study of at least 36 hours as outlined above
- Portfolio presentation
Graduate Certificate in Mathematics Education

The Graduate Certificate in Mathematics Education, housed in the Curriculum and Instruction program in the Department of Teacher Education, is designed for mathematics teachers, coaches, facilitators, and specialists who want to develop their knowledge and skills of the teaching and learning of mathematics in the K-12 classroom. The graduate certificate is a 6-course, 18-credit hour graduate certificate; it does not satisfy licensure requirements. Many schools throughout the state are moving towards instructional facilitators in mathematics. This certificate supports instructional facilitators and underscore pedagogical practices by addressing Common Core State Standards.

Program Requirements

Core Courses (14 hours)

- ECED 7307 Teaching Early Childhood Mathematics
- MCED 7301 Teaching Middle School Mathematics
- MCED 7302 Diagnosis & Remediation in Math
- MCED 7305 Teaching Mathematics to the Gifted
- SCED 7302 Specialized Instructional Methods

Teaching Field Electives (4 hours)

- MATH 5383 Technology in Mathematics
- SCED 7105, 7205, 7305 Independent Study
- OR Graduate coursework in math content

Learning Outcomes

Upon completion of the coursework, students will be able to:

- Understand K-12 mathematics curriculum and pedagogical practices
- Understand and apply strategies for diagnosis and remediation of mathematics deficiencies
- Understand and apply strategies to maximize the potential of mathematical talent
- Develop conceptual understanding and pedagogical practices in mathematics education
Dickinson Hall, Room 419, (501) 569-3124

Master of Education in Middle Childhood Education

The Master of Education in Middle Childhood Education (MCED) is a program that enhances the general expertise of middle-level educators by providing a more comprehensive understanding of young adolescent learners and of the need for a learning environment that is responsive to students’ developmental needs. In addition, this program provides expertise in both teaching content and pedagogy. Individuals with licensure in Middle Childhood Education may teach grades 4-8.

The MCED program is an Initial Licensure Program. NOTE: Grades 5-6 endorsement is no longer available. Additionally, the 8th grade Algebra I endorsement is no longer available.

For more information about the Middle Childhood Education program visit the [website](#).

Admissions Requirements

Regular Admission

- Baccalaureate degree from a regionally accredited institution with a cumulative grade point average of at least 2.75 (4.0 scale), or
- Grade point average of at least 3.0 for the last 60 hours of undergraduate courses, or
- Master’s degree from a regionally accredited institution with a cumulative GPA of at least 3.0

In addition to the required GPA, applicants must have:

- Passing scores on Praxis I, Academic Skills Assessments.

Conditional Admission

- Baccalaureate degree from a regionally accredited institution; a cumulative undergraduate GPA of no lower than 2.5; and a Graduate Record Exam (GRE) score of at least 144 on the Verbal Scale, 141 on the Quantitative Scale, and 4.5 on the Analytical Writing Scale, or
- Completion of at least 12 semester hours of graduate course work in another UALR graduate program or graduate program from another regionally accredited college or university with a cumulative GPA of at least 3.0 and no grade lower than a B
Additional Requirements:

- Upon review of applicant’s transcript, additional content (mathematics, science, language arts, social studies) hours may be required
- At least 15 hours in the area of concentration (6 of which must be at the 3000 or above level)
- 12 hours in the three areas not chosen as a concentration.
- A satisfactory interview completed with Middle Childhood faculty

Legal Requirements Prior to Field or Internship Placements

Students who apply to the Middle Childhood Education Master’s program must complete the following requirements and submit documentation to the Field Placement Office in the College of Education prior to field or internship placements:

- Proof of liability insurance. This insurance is provided through the School Workers Defense Program or by joining the Student Arkansas Education Association (SAEA).
- Criminal records check: State civil record check must be completed and submitted to advisor.
- Complete the Criminal Background Disclosure.

Before being recommended for licensure, students must also submit:

- Criminal records check
- State civil record check, and
- FBI record check.

The student is responsible for the fees associated with these checks.

Initial Licensure Track

The Initial Licensure Track for the Master of Education Degree in Middle Childhood is offered to those with a degree in an area other than education. This program leads to licensure in middle childhood education (math, science, language arts, and social studies). Each person’s transcript will be assessed on an individual basis and an individual program will be developed.

During regular semesters, all courses are offered in the evening or online. Some courses require a field placement in a local school.

Retention Requirements

Once admitted, students are required to maintain a 3.0 GPA with at least a grade of B in all
Middle Childhood Education (MCED) courses. (This includes all courses associated with the licensure/degree plan.) In addition, students’ professional behavior, content knowledge, and classroom performance will be evaluated throughout the program.

Successful completion of the licensure program is not based solely on the number of course credits but requires demonstration of specified professional knowledge, skills, behaviors, and dispositions.

Once the student has begun the program, periodic evaluations will assess progress. Failure to progress satisfactorily might result in a student being removed from the program. While a student may require additional time to meet some performance expectations, the faculty may limit that time and reserves the right to drop a student from the licensure program should appropriate progress not be demonstrated.

Degree Requirements

In the MCED initial licensure track (for non-licensed teachers), there are 36 graduate credit hours, including 12 education core hours, 24 middle-level education emphasis hours (detailed below). In addition, HIST 4355 Arkansas History and successful completion of the Praxis II are required for licensure in Middle Childhood Education in Arkansas.

College of Education/ Foundations Courses (12 hours)

Research (3 hours)
EDFN 7303 Introduction to Educational Research

Assessment (3 hours)
EDFN 7370 Educational Assessment

Instructional Technology (3 hours)
TCED 5300 WS: Developing an Electronic Portfolio
TCED 7350 Integrating Technology in PK-12 Education
LSTE 7305 Survey of Comp-based Learning Systems

Learning Theory (3 hours)
MCED 7312 Development of Young Adolescents
EDFN 7320 Advanced Educational Psychology

Middle-level Education Emphasis Courses (18 hours)

MCED 7313 Middle Level Reflective Teaching {Initial Course}
MCED 7314 Teaching the Middle Level Exceptional Child in the Inclusive Classroom
MCED 7315 Middle Level Curriculum and Pedagogy
MCED 7316 Literature for Young Adolescents
MCED 7317 Middle Level Literacy and Language Arts
MCED 7318 Classroom Management for the Middle Level Teacher
MCED 7319 Internship
TCED 7305 Action Research

Teaching Fields Courses (optional)
MCED 7301 Teaching Middle School Math
MCED 7302 Diagnosis and Remediation in Math
MCED 7305 Teaching Mathematics to the Gifted
MCED 7328 Science Education
MCED 7330 Social Studies Education

Additional Requirements for Certification
HIST 4355 Arkansas History or comparable course
Praxis II: Principles of Learning and Teaching (30523) and
Middle School: Content Knowledge (20146)

Graduation Requirements
- Cumulative GPA of at least 3.0 on an approved program of study as outlined above, and
- Successful completion and defense of an exit portfolio

Courses in Middle Childhood Education

**MCED 7100, 7200, 7300 Workshop in Middle Childhood Education**
Hands-on experiences on various topics. Offered on demand.
MCED 7138, 7238, 7338 Topics in mathematics, education, and various topics of current interest to preschool, elementary, middle school teachers. Offered on demand.

**MCED 7138, 7238, 7338**
Topics in mathematics, education, and various topics of current interest to preschool, elementary, middle school teachers. Offered on demand.

**MCED 7301 Teaching Middle School Mathematics**
Methods and materials used in teaching middle school mathematics, grades 4-8, from a constructivist point of view. Special attention given to the utilization of manipulatives in teaching all topics. Common Core State Standards and curriculum standards as identified by the National Council of Teachers of Mathematics are curriculum standards as identified by the National Council of Teachers of Mathematics covered, as well as instructional strategies for teaching them.
Consideration given to contemporary problems, trends, and practices in the field.

**MCED 7302 Diagnosis and Remediation of Mathematics Learning Difficulties**
A study of the causes of mathematics learning difficulties, approaches to diagnosis, and some appropriate teaching strategies. Candidates review, discuss, and summarize research articles concerning diagnosis and assessment; analyze a variety of measurement devices; develop, construct, and administer two specific diagnostic tools; diagnose a specific learner’s performance in mathematics; and make recommendations for instruction.

**MCED 7303 Practicum/Internship in Mathematics Education**
Application of diagnosis, principles of remediation; laboratory experiences in evaluation, instruction of children; content relates to problems resulting from laboratory experience. Offered on demand.

**MCED 7305 Teaching Mathematics to the Gifted**
An overview of current philosophies, programs, and curricula for teaching mathematically gifted students. Topics include characteristics of mathematically gifted, development of appropriate classroom strategies, planning a differentiated curriculum, development of enrichment units, critical mathematics content and concepts, and course materials for teachers.

**MCED 7308 Teaching Economics in the Middle School**
Developing, implementing school techniques, activities related to an interpretation of the values in American society, economic concepts and principles. Offered in fall, spring, and summer.

**MCED 7312 Development of Young Adolescents**
Study of hereditary and environmental influences on the physical, intellectual, emotional, and social development of adolescents, the cultural, social, emotional, and intellectual differences as well as learning and problem-solving processes, self-esteem, and motivation as they apply to young adolescents.

**MCED 7313 Introduction to Middle Level Education**
This course covers the history, philosophy, and major concepts of middle level education. Organizational components of middle level schools, current issues and trends in middle level education, and diversity in family structures are studied. Relationships between schools and community organizations, between schools and families, and between schools and diverse groups are discussed. Strategies are presented for working with families, state agencies, and community organizations, and for linking early adolescent learning to community resources.

**MCED 7314 Teaching the Middle Level Exceptional Child in the Inclusive Classroom**
Enhances the knowledge and skills of middle childhood teachers to better educate students with exceptionalities in their classrooms. Collaboration in the design and implementation of individualized plans for students with disabilities and for students who are gifted. Acquisition of skills needed to support the implementation of behavior intervention plans and transition plans. Participation in the design and implementation of modifications for students with high abilities.
Design and implementation of curriculum, materials, instructional strategies, and assessment modifications.

**MCED 7315 Middle Level Curriculum and Pedagogy**
A comprehensive research-based framework on cognition, learning, and classroom management. Focus on middle level student behavior in the design of curriculum, instruction, assessment, and classroom management strategies, as well as the evaluation of the impact of their efforts.

**MCED 7316 Literature for Young Adolescents**
Best possible options for associations between middle level students and literature. Literature-based learning and learning how to select a wide variety of books from the best examples of all genres is stressed. Early adolescent literature is read. Developmentally appropriate instructional procedures in reading and writing to aid in comprehension is stressed. Other topics include integrating literature in the content areas, literature study circles, flexible grouping, how to use literature to assist multicultural understanding, the benefits of using school book clubs, and assessment.

**MCED 7317 Middle Level Literacy and Language Arts**
Provides a thorough examination of current middle level literacy issues, research, and practices in grades 4-8. Presents a global view of the school, community, teachers, administrators, and parents and the role of each in promoting literacy. Developmental, cognitive, and instructional variations common to this age group, integration of curriculum through interdisciplinary units, language arts in the content areas, phonics and word studies, children’s literature, flexible grouping, and literacy assessment.

**MCED 7318 Classroom Management for the Middle Level Teacher**
This course covers fundamental principles underlying middle childhood developmental programs in grades 4-8. It includes creating and fostering classroom management techniques. It also includes strategies for the design of environments which provide a safe place for teaching and learning. Connecting the community to the school for effective discipline and parental support and involvement is included.

**MCED 7319 Internship**
In this course, candidates will be placed in an active teaching role in a local school. Candidates will plan, teach, and reflect on the experience. Candidates will be responsible for all aspects of the classroom environment including making accommodations for children with special needs. All of the school resources will be used, and competence in using technology is required.

**MCED 7328 Science Education**
Science Methods is designed to prepare graduate candidates with the specialized expertise, professional development, and communication skills to strengthen effectiveness as a middle school science teacher. The class will focus on the advanced knowledge, skills, and dispositions needed to practice current methods of inquiry-based instruction and learning. This instruction shall include the application of hands-on activities that focus on the use of manipulation and has
an emphasis on integrating science within the curriculum. There will be a strong emphasis on the use of technology for curriculum development and lesson presentations. The student will use the content to develop those pedagogical techniques and activities that encourage and promote gains in science learning.

**MCED 7330 Social Studies in the Middle School**
An in-depth study in social studies education in the middle grades (4-8). Builds on the belief that students need to construct knowledge in their own minds in order for it to be meaningful to them. Emphasis is placed on the meaningful learning of social studies content, skills, and values, in order to promote democratic behavior in early adolescents. Presentation of the theory and research explaining meaningful learning in social studies, the structure of knowledge to be learned, and strategies for effective and powerful social studies teaching. Candidates plan a developmentally appropriate hands-on experience with appropriate material and supportive environment necessary for children’s meaningful exploration and discovery.

**MCED 7350 Seminar in Middle Education**
Prerequisite: 24 graduate hours. Variable content based on current issues, effective practices in middle level education of interest to in-service teachers.
Reading

**Dickinson Hall, Room 300, (501) 569-3124**

Programs offered: Literacy Intervention Specialist graduate certificate, Literacy Coach Specialist graduate certificate, Dyslexia Therapist graduate certificate, Master of Education, Educational Specialist, and Doctor of Philosophy. Additionally, UALR offers specialized training for Reading Recovery educators.

The Reading Education Program in the UALR College of Education and Health Professions offers the following programs and degrees to meet the needs of teachers progressing along their career pathway.

<table>
<thead>
<tr>
<th>Training Programs</th>
<th>Graduate Certificates</th>
<th>Graduate Degrees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Recovery Teacher Leader</td>
<td>Literacy Intervention Specialist Graduate Certificate</td>
<td>Master of Education in Reading [M.Ed.]</td>
</tr>
<tr>
<td>Reading Recovery Teacher</td>
<td>Literacy Coach Specialist Graduate Certificate</td>
<td>Educational Specialist in Reading [Ed.S.]</td>
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<tr>
<td></td>
<td>Dyslexia Therapist Graduate Certificate</td>
<td>Doctor of Philosophy in Reading [Ph.D.]</td>
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**Training Programs**

**Reading Recovery Teacher Leader**

To be accepted for training, the Reading Recovery Teacher Leader candidate must meet all criteria established by the Reading Recovery Guidelines and Standards including an application process and a letter of commitment from the employer. Reading Recovery Teacher Leader candidates participate in an 18 credit hour program of study, including an internship in Arkansas schools.

**Required Courses (21 hours)**

- READ 7342 Principles of Literacy and Cognition I
- READ 7343 Principles of Literacy and Cognition II
- READ 7344 Intervention Designs for Struggling Readers
READ 8340 Research in Language and Literacy
READ 7398 Theory and Practice in Literacy
READ 8301 Supervision and Organization of Reading Programs
READ 8302 Professional Experience in Reading Programs

Additional information on the Reading Recovery Training programs can be obtained at the UALR Center for Literacy website.

Reading Recovery Teacher

UALR is a certified University Training Center for preparing Reading Recovery teachers. The training program is regulated by the Guidelines and Standards for preparing Reading Recovery Educators. Upon acceptance to the UALR Reading Recovery Teacher-Training program, the candidate completes 6 credit hours of specialized Reading Recovery course work. In Year 1, the candidate receives training as a Reading Recovery Teacher. In Year 2, the candidate receives training in the K-6 small group intervention model.

Required Courses (Six hours):
READ 7342 Principles of Literacy and Cognition I
READ 7343 Principles of Literacy and Cognition II

Graduate Certificates

The Reading Education Program offers three graduate level certificates: the Literacy Intervention Specialist graduate certificate, the Literacy Coach Specialist graduate certificate, and the Dyslexia Therapist graduate certificate. The Literacy Intervention Specialist and Literacy Coach Specialist programs include an 18 credit hour program of study for preparing candidates for the specialized roles aligned with the International Reading Association. The Dyslexia Therapist Graduate Certificate is a 12 credit hour post-baccalaureate program designed for teachers to become certified by the Arkansas Department of Education (ADE) as K-12 dyslexia therapists.

Graduate Certificate Admission Requirements

All applicants for both regular and conditional admission status must have:

- Valid teaching license (Arkansas or other state)
- Favorable recommendations from faculty in the program

Specific admission criteria for regular or conditional admission:

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<th>Regular Admission</th>
<th>Conditional Admission</th>
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<tbody>
<tr>
<td>Baccalaureate degree from a regionally</td>
<td>Baccalaureate degree from a regionally</td>
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</table>
accredited institution with a cumulative grade point average of at least 2.75. (4.0 scale)

or

- Grade point average of at least 3.0 for the last 60 hours of undergraduate courses.

or

- Master’s degree from a regionally accredited institution with a cumulative grade point average of at least 3.0.

(Please note: the master’s degree requirement above is required for entry into the Literacy Coach Specialist program as it is a post-master’s program.)

accredited institution; a cumulative undergraduate GPA of no lower than 2.5; and a Graduate Record Exam (GRE) score of at least 141 on the Verbal Scale, 150 on the Quantitative Scale, and 4.5 on the Analytical Writing Scale.

or

- Completion of at least 12 semester hours of graduate course work in another UALR graduate program or graduate program from another regionally accredited college or university with a cumulative GPA of at least 3.0 and no grade lower than a B.

Literacy Intervention Specialist

The Literacy Intervention Special graduate certificate is an 18 credit hour post-baccalaureate program designed to prepare teachers for the specialized role of intervention specialist. The courses focus on teaching struggling readers, including diagnosis of early reading difficulties, designing interventions for working with struggling readers individually and in small groups, and creating a comprehensive intervention model for literacy improvement. Candidates must complete nine hours of required courses and nine hours of approved electives.

Required Courses (Nine hours)

READ 7344 Intervention Designs for Struggling Readers
READ 7345 Advanced Practicum in Intervention Models
READ 7354 Content Area Literacy

Elective Courses (Nine hours)

READ 7340 Best Practices in Literacy Instruction
READ 7342 Principles in Literacy & Cognition I
READ 7342 Principles in Literacy & Cognition I
READ 7395 Comprehensive Literacy Model for School Improvement
READ 7365 Specialized Assessment in Early Literacy Instruction
READ 7352 Diagnosis of Reading Difficulties
READ 7330 Children’s Literature Across the Curriculum
READ 7397 Creating Literate Environments for Young Learners
READ 7393 Special Topics: Advanced Studies in Literacy Intervention

Literacy Coach Specialist

The Literacy Coach Specialist Graduate Certificate is an 18 credit hour post-master’s program. The certificate is designed to prepare the reading specialist for the unique role of literacy coach in today’s schools. Aligned with the International Reading Association Standards for Reading Professionals, the program of study focuses on three major areas: 1) instruction, 2) assessment, and 3) leadership. An emphasis is placed on supervising and coordinating a school’s literacy program, including providing professional development, coaching teachers, designing curriculum, teaching struggling readers, and conducting research on literacy and school change. Additional information on the Literacy Coach Specialist program can be obtained from the Reading program website. The courses for the Literacy Coach Specialist graduate certificate can be applied toward an advanced degree in reading education.

Required Courses (18 hours):

READ 7398 Theory and Practice in Literacy
READ 8301 Supervision and Organization of Reading Programs
READ 8302 Professional Experiences in Reading
READ 8305 Literacy Coaches as Agents of Change
READ 8304 Curriculum Design and Evaluation
READ 7395 Comprehensive Literacy Model for School Improvement

Literacy Coach Specialist Graduation Requirements

To complete the requirements for the Literacy Coach Specialist graduate certificate, candidates must:

- Successfully complete the 18 credit hour program of study with a minimum GPA of 3.0.
- Successfully defend a Literacy Coach Portfolio that demonstrates proficiency in program areas.

Dyslexia Therapist

The Dyslexia Therapist Graduate Certificate is a 12 credit hour post-baccalaureate program designed for teachers to become certified by the Arkansas Department of Education (ADE) as dyslexia therapists. This certificate meets ADE competencies defined by Arkansas Law as provided in ACT 1294 of 2013. Aligned with standards of the International Dyslexia Association (IDA), the International Literacy Association (ILA), and the Interstate New Teacher Assessment
and Support Consortium (INTASC), this program provides teachers with the knowledge and skills to work effectively with students experiencing moderate to severe reading difficulties including dyslexia. Additional information can be obtained from the Department of Teacher Education website or from the UALR Center for Literacy website.

Required Courses (12 hours):

READ 7393 Special Topics in Reading Education: Teaching Children with Dyslexia
READ 7353 Diagnosis of Reading Difficulties II
READ 7385 Formative Assessment and Interventions for children with Dyslexia
READ 7387 Advanced Practicum for Dyslexia Therapists

Graduate Degrees

UALR College of Education and Health Professions offers three graduate degrees in Reading, enabling educators to significantly increase their knowledge, skills, and dispositions in the field of literacy education as well as to pursue a variety of important professional roles in literacy throughout the educational world.

Master of Education in Reading

The Master of Education in Reading focuses on preparing candidates for licensure as reading specialists, effective literacy educators, or intervention specialists. The M.Ed. program of study emphasizes the relationship between theory, research, and practices in literacy education. The M.Ed. in Literacy program meets CAEP, NCATE, Arkansas Department of Education, and International Literacy Association standards.

For more information about the M.Ed. Reading program, please visit the website.

M.Ed. Admission Requirements

All applicants for regular admission must have a 2.7 cumulative undergraduate GPA or a 3.0 in the last 60 undergraduate hours. Alternatively, applicants should have at least a 3.0 GPA in 12 or more hours of graduate course work.

All applicants are responsible for securing information related to state licensure as a reading specialist (Arkansas or other state) to ensure that they meet state licensure requirements during or after the completion of course work toward the degree.

International applicants may apply to the M.Ed. Reading program. International applicants must meet the following requirements in addition to the regular admission standards listed above.

- Although the board policy (502.6) requires a score of 71 on the Internet-Based TOEFL (IBT), International Student Services suggests requiring a score ≥ 79 on the IBT or 6.5 on the
IELTS, which is a common practice at the graduate level at UALR. Students with US based undergraduate degrees and native English speakers (e.g., UK, Canada besides Quebec, New Zealand, Ireland, and Australia) will not be asked to submit a TOEFL or IELTS score. This program will require that candidates must have a bachelor’s degree in education or education-related services verified by their home ministries in Education or closely related discipline. They must not have just completed IELP, as mastery of English is critical to success in the program. The candidate must possess an equivalent minimum GPA of 2.7 or greater. International candidates must submit articulated transcripts in order to determine whether they meet the minimum admission thresholds. The Graduate School requires WES-articulated transcripts from all admitted international students.

M.Ed. Program Requirements (30 Hours)

Core Requirements (Nine hours)

READ 7351 Foundations of Teaching Reading
READ 7354 Literacy in the Content Areas
READ 7306 Literacy and Technology

Concentrations (Select One)

Reading Specialist* (15 Hours) — Licensure may require additional hours. Please contact program coordinator for more information.

READ 7352 Diagnosis of Reading Difficulties I
READ 7327 Contemporary Curriculum Design
READ 7356 Practicum in Reading
READ 7357 Seminar in Reading
READ 7370 Advanced Practicum in Reading

Literacy & Culture (12 Hours)

READ 7310 Literacy, Language and Culture
MCED 7316 Adolescent Literature
READ 7348 Teaching Writing Process in Schools
READ 7307 Special Topics in Literacy

Intervention (12 Hours)

READ 7340 Best Practices in Literacy Instruction
READ 7344 Intervention Designs for Struggling Readers
READ 7398 Theory and Practice in Literacy
READ 7330 Children’s Literature

Electives (Reading Specialist Concentration: Six Hours; Literacy & Culture Concentration: Nine
Hours; Intervention Concentration: Nine Hours): Electives may include courses from any concentration. Seek advisement.

READ 7307 Special Topics in Literacy  
READ 7330 Children’s Literature Across the Curriculum  
READ 7321 Processes and Strategies in Reading  
READ 7397 Creating a Literate Environments for Young Learners  
READ 7361 Language and Reading Instruction  
READ 7365 Specialized Assessment in Early Literacy Instruction  
READ 7395 Comprehensive Literacy Model for School  
READ 7342 Principles of Literacy and Cognition I  
READ 7343 Principles of Literacy and Cognition II  
READ 7345 Advanced Practicum in Intervention Models

*Reading Specialist Licensure

After completion of the M.Ed. program, the Arkansas Department of Education requires individuals seeking Reading Specialist certification meet the following criteria:

- Pass the Praxis II Reading Specialist Exam
- Three (3) years teaching experience is required by ADE to add to a teaching license.

M.Ed. Retention Requirements

Once admitted, candidates are required to maintain an overall grade point average of 3.0 with at least a grade of C in all Reading Education (READ) courses in order to continue in the M.Ed. Program.

Throughout completion of coursework, program faculty monitors candidates’ performance, professional behaviors, and dispositions. When needed, candidates may be required to participate in professional development conferences. Successful advancement in the program is not based solely on the number of credits earned; it also requires demonstration of professional knowledge, skills, and dispositions.

M.Ed. Graduation Requirements

- Completion of 30 hours of program course work (Reading Specialist Concentration requires 36 hours)
- 3.0 or higher cumulative grade point average on program course work
- Completion of a Coaching Portfolio, which includes required coursework assessments uploaded into Chalk and Wire (Reading Specialist Concentration only)
- Passing of the Praxis II Reading Specialist Exam (for Reading Specialist Concentration only)
- Completion of Literacy Portfolio, which includes required coursework assessments uploaded into Chalk and Wire (Literacy & Culture and Intervention Concentrations only)
Ed.S. Admission Requirements

All applicants for both regular and conditional Admission status must have a valid, initial or standard teaching License (Arkansas or other state).

<table>
<thead>
<tr>
<th>Regular Admission</th>
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<tbody>
<tr>
<td>• Master’s degree from a regionally accredited institution with a cumulative grade point average of at least 3.3</td>
<td>Graduate Record Exam (GRE) score of at least 150 on the Verbal Scale, 141 on the Quantitative Scale, and 4.5 on the Analytical Writing Scale or</td>
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<td></td>
<td>• Completion of at least 12 semester hours of graduate course work in another UALR graduate program or graduate program from another regionally accredited college or university with a cumulative GPA of at least 3.0 and no grade lower than a B</td>
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Ed.S. Program Requirements

The Ed.S. in Reading requires a minimum of 36 hours beyond the master’s degree, including six hours in research, 15 hours of emphasis requirements in reading, and nine hours of reading electives. The candidate is expected to design and implement a research project as a culminating experience. Two research options meet this requirement: six hours of thesis, or three hours of research practicum and three hours of scholarly writing. Additional exit requirements include the successful completion of an electronic portfolio in Chalk and Wire and a passing score on a comprehensive written examination.

Prerequisite Requirements

If the candidate did not complete a research course in the master’s program, the candidate will be required to complete EDFN 7303 Intro to Research (or equivalent course) prior to enrolling in 7304 Basic Statistics.

If the candidate does not have a reading license or a master’s in reading, the candidate will be required to complete a minimum of six hours of prerequisite course work in foundations of teaching reading and diagnosis in reading difficulties or equivalent course work.

Common Requirements (Six hours)

EDFN 7304 Basic Statistics
EDFN 8306 Advanced Research Methods
or EDFN 7373 Qualitative Research

Emphasis Requirements (15 hours)
READ 7398 Theory and Practice in Literacy
READ 8340 Research in Language and Literacy
READ 8301 Supervision and Organization of Reading Programs
READ 8302 Professional Experiences in Reading
READ 8304 Curriculum Design and Evaluation of Literary Programs

Electives (Nine hours)
READ 7321 Processes and Strategies in Reading Comprehension
READ 7330 Children’s Literature Across the Curriculum
READ 7340 Best Practices in Literary Instruction
READ 7344 Intervention Designs for Struggling Learners
READ 7345 Advanced Practicum in Intervention
READ 7348 Teaching the Writing Process in Schools
READ 7354 Literacy in the Content Areas
READ 7365 Specialized Assessment in Early Literacy Instruction
READ 7395 Comprehensive Literacy Model for School Improvement
READ 7397 Creating Literate Environments
READ 8305 Literacy Coaches as Agents of Change

Options (Six hours)
READ 8348 Scholarly Writing in Literacy
READ 8349 Research Practicum in Literacy
or
READ 8350 Thesis I *
READ 8351 Thesis II*

*If the student plans to seek a doctorate in reading, Thesis I and II are recommended.

Reading Licensure
The Arkansas Department of Education offers two levels of licensure: elementary and secondary. If candidates are seeking reading certification, they are required to take the appropriate Praxis II examination for certification.

Doctor of Philosophy in Reading
The Doctorate of Philosophy (Ph.D.) in Reading degree is a program of study designed to prepare candidates with the knowledge and expertise to become teacher educators, scholars, and literacy
The Ph.D. in Reading is a research-oriented program of study with rigorous coursework in literacy education combined with cognitive apprenticeships in the field and opportunities to collaborate with faculty on scholarly work and research projects.

Ph.D. Admission Requirements

Candidates will submit a graduate application to the UALR Graduate School. Admission decisions will be made on a holistic basis to discern the candidate’s promise for doctoral study and to ascertain the match of the candidate’s educational goals with the resources and goals of the reading program.

- Minimum grade point average of 3.3-3.5 on master’s degree or higher
- GRE quantitative score with a minimum score of 141
- GRE verbal score with a minimum score of 150
- GRE analytical writing score with a minimum score of 4.5
- Three professional letters of recommendation
- Reading faculty interview, including professional goals statement, current curriculum vitae, and other requested evidences of the applicant’s promise for doctoral studies

Conditional Admission

If the standard for admission is not met, a conditionally admitted student may enroll in up to 12 semester hours. Upon completion of 12 semester hours in the program, the reading faculty will review the work completed to that point by the applicant as part of the overall admissions application to determine if the student will be granted regular admission to the program.

Admission to regular status will be contingent upon the student successfully completing 12 hours of the following coursework with a minimum 3.5 GPA.

READ 8320 Phonology, Orthography, and Linguistics
READ 8330 Cognitive and Social Theories in Literacy Learning
READ 8348 Scholarly Writing in Literacy
READ 8349 Research Practicum in Literacy
EDFN 7373 Qualitative Research Methods
EDFN 8305 Intermediate Statistics
EDFN 8306 Advanced Research Methods

Residence Requirements

Residence is defined as a full-time registration for a given semester on the UALR campus. The summer term is included in this period. Two consecutive semesters of residence are required with a minimum of six semester hours taken each semester.

Ph.D. Program Requirements
The Ph.D. in Reading requires a minimum of 108 hours (72 hours beyond the master’s degree) as determined by student and student’s coursework advisor. The program of study is organized under four curricular areas:

1. Literacy Core;
2. Research Core;
3. Specialty Area; and

The literacy core includes 15 hours of course work that provides candidates with an integrated exploration of seminal theories, key research studies, and historical contributions in reading instruction. The research core includes 15 hours of course work that addresses current information about research design and methods for quantitative and qualitative studies, including statistics and data management.

The specialty area includes 24 hours of course work that provides candidates with a range of options for deepening their knowledge in concentrated areas. The dissertation courses include a minimum of 18 hours of course work that provides candidates with the knowledge and experiences for designing and conducting scholarly research in literacy education. Additional requirements include the successful completion of an electronic portfolio in Chalk and Wire, a passing score on a comprehensive written examination, and the successful defense of the dissertation research.

Prerequisite Requirements

Reading Prerequisites: If the candidate does not hold a reading license or a Master’s in reading, the candidate will be required to complete nine hours of foundational reading coursework, including Foundations of Teaching Reading, Reading Diagnosis (or equivalent courses), and three hours of Reading practicum prior to enrolling in any 8000-level reading coursework. These hours can be applied as electives in the degree plan.

Research Prerequisites: If the candidate did not complete a statistics or entry-level research class in the Master’s or Educational Specialist program, the candidate will be required to complete EDFN 7304: Basic Statistics and EDFN 7303: Introduction to Research prior to enrolling in any 8000-level research or statistics courses (some courses may have other prerequisites, as well). If the candidate did not complete a qualitative research class in the Master’s or Educational Specialist program, the candidate will be required to complete EDFN 7373: Qualitative Research Methods prior to enrolling in EDFN 8383: Advanced Qualitative Research Methods.

Literacy Core Requirements (15 hours)

READ 8320 Phonology, Orthography, & Linguistic Processes
READ 8330 Cognitive & Social Theories in Literacy Learning
READ 8342 Reading Comprehension: From Research to Practice
READ 8345 Theoretical Models and Historical Perspectives
READ 8399 Doctoral Seminar in Reading

Research Core: (Select 15 hours)

EDFN 8305 Intermediate Statistics  
EDFN 8308 Advanced Statistics  
EDFN 8306 Advanced Research Methods  
EDFN 8330 Mixed Methods  
EDFN 8383 Advanced Qualitative Research Methods  
EDFN 8310 Applied Measurement in Research and Analysis

Specialty Areas: (Select 24 hours)

READ 8340 Research in Language and Literacy  
READ 8348 Scholarly Writing in Literacy  
READ 8349 Research Practicum in Literacy  
READ 8301 Professional Experiences in Literacy Programs  
READ 8302 Supervision and Organization of Reading Programs  
READ 8304 Curriculum Design and Evaluation of Literacy Programs  
READ 8305 Literacy Coaches as Agents of Change  
READ 7321 Processes and Strategies in Reading Comprehension  
READ 7330 Children’s Literature Across the Curriculum  
READ 7348 Teaching Writing in Elementary and Secondary Schools  
READ 7395 Comprehensive Literacy Model for School Improvement  
READ 7397 Creating Literate Environments  
READ 7398 Theory and Practice in Literacy

Dissertation (18 hours)

Following the completion of all course work, the candidate writes a dissertation proposal detailing the intended research and the rational behind it. The candidate must defend the proposal to the dissertation committee. After approval is granted, work on the dissertation can proceed. The dissertation represents the culmination of an original major research project completed by the student. The candidate may continue to enroll in dissertation beyond the fourth year but must have the dissertation completed prior to the ten-year limit.

READ 9199-9999 Dissertation

Courses in Reading Education

**READ 7107, 7207, 7307 Special Topics in Literacy**

Special topics in literacy education including, but not limited to, in-depth study of phonemic awareness, phonics, fluency, vocabulary development and / or reading comprehension as they relate to historical and current perspectives at the state and national level. Offered on demand.
READ 7193, 7293, 7393 Special Topics in Reading Education
Prerequisites: graduate standing, consent of instructor. Selected theoretical, research, and practical topics. These courses are used for state initiatives, such as Reading First, ELLA, McRatt, and Effective Literacy. May be repeated for credit. Offered on demand.

READ 7306 Literacy and Technology
Candidates will examine how to integrate new literacies, software, and technology across the curriculum. Candidates will study the strengths and limitations of technology and computer applications for the development and integration of effective technology lessons in a literacy curriculum across content areas.

READ 7310 Literacy, Language, and Culture
Candidates will explore how literacy learning takes place among diverse populations, including second language learners. Candidates explore the role of literature in promoting cross cultural understandings in a student-centered literacy curriculum. Specific topics include selecting literature and learning best practices to create a classroom that promotes social justice and critical literacy.

READ 7321 Processes and Strategies in Reading Comprehension
This course focuses on the processes of reading comprehension, including the influence of perceptions, beliefs, motivation, language, and strategies for understanding. An emphasis is placed on effective questioning, text selection, discourse chains, and environment as ways to promote comprehension.

READ 7326 Developmental Reading
Development of a comprehensive reading program; current practices in reading instruction and assessments; selection of effective materials, and meeting the needs of a diverse population.

READ 7327 Contemporary Curriculum Design
Philosophy, administration, and techniques of curriculum design, including participation in development of a culturally pluralistic curriculum.

READ 7330 Children’s Literature Across the Curriculum
This course is based upon current issues, research, and effective practices regarding the use of children’s literature across the curriculum. Students will learn how to select quality children’s books for use in a variety of content areas; develop respect and appreciation for numerous genres, multicultural literature, authors, illustrators, and poets; and plan lessons that use children’s literature to effectively support and enrich instruction in a variety of classroom settings.

READ 7340 Best Practices in Literacy Instruction
The course examines research-based practices in K-12 literacy instruction, including theories of differentiated instruction, reciprocal processing, integrated curriculum, and linguistic diversity.
**READ 7342 Principles of Literacy and Cognition I**
Course restricted to Reading Recovery teachers-in-training. This course is the first of two courses of teacher training for the Reading Recovery program. It covers the theoretical foundations of a socio-psycholinguistic early intervention model appropriate to meet the needs of students having confusions with reading and writing conventions and includes on-going practical experiences in a school setting. Observation and specialized procedures are emphasized. The rationales and procedures of a short-term intervention program are discussed and practiced.

**READ 7343 Principles of Literacy and Cognition II**
Prerequisite: Principles of Literacy and Cognition I. Course restricted to Reading Recovery teachers-in-training. This course is the second of two courses of teacher training for the Reading Recovery Program. It covers the theoretical foundations of a socio-psycholinguistic early intervention model appropriate to meet the needs of students having confusions with reading and writing conventions and includes on-going practical experiences in a school setting. Observation and specialization procedures are emphasized. The rationales and procedures of a short-term intervention program are discussed and practiced.

**READ 7344 Intervention Designs for Struggling Learners**
A course involving supervised practice in intervention instruction for children experiencing difficulty in literacy. The class will focus on differentiating reading and writing instruction within various settings, including supplemental and classroom, for meeting the needs of struggling learners. The course will include techniques for using intervention team meetings to select appropriate services, collaborating with teachers across intervention programs, and using assessment to monitor children’s progress.

**READ 7345 Advanced Practicum in Intervention Models**
Prerequisites: READ 7344 or consent of the instructor. This course is an advanced study of intervention models for children experiencing difficulty in literacy. Candidates will implement a research-based intervention model in a school setting, collect data on the effectiveness of the model, and write a research paper.

**READ 7348 Teaching the Writing Process in Schools**
The course emphasizes the teaching of the writing process within a writing workshop format, including pre-writing, drafting, revising, editing, and publishing. Additional areas of study will include writing conferences, keeping a writer’s notebook, genre writing, evaluating writing, and other issues related to learning to write.

**READ 7350 Early Childhood Literacy Instruction and Assessment**
This course will focus on the foundations of literacy instruction at the primary level (Pre-K through grade 4). Emphasis will be given to learning to teach through the components of a balanced literacy program and the supporting theories and research. Special attention will be placed on designing and managing literate classroom environments, the importance of selecting and using appropriate texts, developing students’ language and literacy skills, and using assessments to guide instruction.
READ 7351 Foundations of Teaching Reading
Psychological dimensions of reading; principles of learning; organizational pattern affecting reading instruction; scope of the reading process; correlates of reading instruction; emphasis on appropriate use of various learning, psycho-linguistic theories in planning reading programs to meet children’s needs.

READ 7352 Diagnosis of Reading Difficulties I
Prerequisite or Co-requisite: READ 7351. This course explores the causes of reading difficulties/disabilities, approaches to diagnosis, and appropriate remedial measures. Candidates analyze a variety of assessments, including formal and informal assessment instruments, administer and interpret assessments and make recommendations for appropriate instructional methodologies for specific students.

READ 7353 Diagnosis of Reading Difficulties II.
Prerequisite: READ 7352 or admission to the Dyslexia graduate certificate program. This course is designed to extend candidates’ ability to assess and evaluate students with moderate to severe reading difficulties, including dyslexia. Additional content will focus on review of diagnostic procedures, review of referral and intervention processes, and a multi-disciplinary team approach.

READ 7354 Literacy in the Content Area
The course centers on content literacy learning. Candidates will learn strategies to engage students in the areas of reading, content vocabulary, comprehension, writing, and multi-genre use in the classroom across content areas.

READ 7356 Practicum in Reading
Prerequisites: READ 7351, READ 7352. Candidates in this course will be involved in a clinical experience that supports the focus of their professional goals. Students will plan and implement an instructional program for students. The content of the class will include problem solving around the issues related to working in the clinical experience.

READ 7357 Seminar in Reading
Prerequisites: a minimum of 15 hours in reading and consent of instructor. Current issues, influential researchers and theorists in literacy education, and effective practices. Course requires Internet and library searches and a research project. Offered in spring.

READ 7361 Language and Reading Instruction in Early Childhood
Language development programs and reading methods, materials, teaching strategies for preschool and primary-age; relates speaking, listening, writing and reading to instructional strategies; planning administering comprehensive language readiness programs for preschool, primary age students. The course includes formal and informal evaluation techniques for young children; teaching emphasis on discovering children’s personal language competencies; multicultural emphasis on dialect and reading. Offered in spring and summer.

READ 7365 Specialized Assessment in Early Literacy Instruction
The course focuses on the principles of early intervention for diagnosing literacy problems for students, including an understanding of emergent literacy and the experiences that support it. Special attention will be placed on designing individualized and group instructional interventions targeted toward those students in greatest need or low proficiency levels, including knowledge of instructional implications of research in special education, psychology, and other fields that deal with the treatment of students with reading and learning difficulties.

**READ 7370 Advanced Practicum in Reading**
Prerequisites: READ 7352, READ 7356. This is a clinical course that requires a supervised experience in working with struggling literacy learners. Candidates in this course will work with individual students as well as small groups of students. Offered in summer.

**READ 7385 Formative Assessment and Interventions for Children with Dyslexia**
Prerequisite: READ 7353. The course focuses on the principles of intervention for diagnosing literacy problems for students from the emergent stages of reading through the advanced stages of reading to learn. Special attention is given to the use of formative assessments and delivering small group interventions targeted toward students experiencing moderate to severe difficulties with literacy development, including dyslexia.

**READ 7387 Advanced Practicum for Dyslexia Therapists**
Prerequisite: READ 7353. This course is the capstone experience for candidates working toward certification as a dyslexia therapist in Arkansas. Candidates will implement a research-based intervention model in a school setting, collect data on the effectiveness of the intervention model and strategies employed, and write an intervention report.

**READ 7395 Comprehensive Literacy Model for School Improvement**
The course is designed as a summer literacy institute for teachers and school teams interested in implementing a comprehensive literacy model, including a framework for literacy, individual and small group interventions, literacy team meetings, assessment walls and progress, school plans, and literacy coaching. The course is a requirement for the Literacy Coach certificate program.

**READ 7397 Creating Literate Environments**
The course focuses on implementing a workshop approach in reading, writing, and content areas for meeting the needs of all students, including how to use reading strategies to access content knowledge. An emphasis is placed on organizing instruction to include a balance of whole group teaching, small group instruction, and individual conferences. Literacy components are discussed, including the rationale and procedures for implementing mini-lessons, guided reading, literature discussion groups, shared reading, small group assisted writing, and one-to-one conferences.

**READ 7398 Theory and Practice in Literacy**
This course examines literacy theories and their practical implications for instruction. Theories of knowledge acquisition, literacy processing, assisted performance, and transfer are examined and applied to reading and writing. Students conduct an action research project in a literacy-related area.
READ 8301 Supervision and Organization of Reading Programs
This course focuses on preparing reading specialists and literacy coaches for supervising and organizing a school-wide literacy program, including organizational techniques and instructional approaches. An additional focus is placed on developing the knowledge and skills of a literacy coach in three major areas: coaching teachers, providing professional development to school personnel, and evaluating a school’s literacy program.

READ 8302 Professional Experiences in Reading
The course focuses on practical experiences with a literacy program in a school. Requires a minimum of 10 clock hours a week in the appropriate practicum setting, attendance at scheduled seminars, and a portfolio that demonstrates competencies as a reading professional, including conducting literacy team meetings and staff development, coaching teachers, making curricula decisions, and collecting data for school improvement. Supervised internships are required for literacy coaches and other literacy leaders.

READ 8304 Curriculum Design and Evaluation of Literacy Programs
This course focuses on designing and assessing literacy curriculum, including evaluating literacy programs and materials and analyzing their evidence-based rationales, aligning curriculum to state and professional standards, creating activities and rubrics to match curriculum, and using school-embedded professional development to achieve literacy goals.

READ 8305 Literacy Coaches as Agents of Change
This course focuses on the roles and responsibilities of a literacy coach, including specialized techniques and language prompts for scaffolding teachers. An emphasis is placed on observing change over time in knowledge levels and types of self-reflection. Other responsibilities include modeling lessons, conducting team meetings, leading study groups, selecting materials, and collecting and analyzing data for school improvement.

READ 8320 Phonology, Orthography, and Linguistic Processes in Reading
This course focuses on the theories of written language learning, including how phonological and orthographic language systems change over time. Theories and research related to letters, sounds and their relationships, word patterns, and spelling knowledge will be used to plan reading instruction. An emphasis will be placed on the role of texts for stimulating print awareness and developing strategies for integrating multiple sources of information.

READ 8330 Cognitive and Social Theories in Literacy Learning
This course examines theories of cognitive, linguistic, and social learning and their practical implications for teaching students in the elementary and middle grades. A focus is placed on using language as a problem-solving tool for learning about literacy. Research-based components of literacy are examined and applied to the everyday context of teaching and learning.

READ 8340 Research in Language and Literacy Acquisition
This course examines the theories and research on language and literacy acquisition, including the description of methods and techniques employed in literacy research. Students design and
conduct a research project in a literacy-related area.

**READ 8342 Reading Comprehension: From Research to Practice**
This course examines the theories and research on reading comprehension and implications to instructional practice, including cognitive, social, linguistic, and motivational influences in comprehending messages.

**READ 8345 Theoretical Models and Historical Perspectives in Literacy**
This course examines contemporary models of reading, including information processing, interactive, transactional, psycholinguistic, sociocognitive, and other prominent models of reading. Candidates will trace the history and pertinent influences on the teaching of reading and reading practices from colonial to contemporary times.

**READ 8348 Scholarly Writing in Literacy**
The course focuses on how to prepare reading candidates to write and publish for a scholarly audience, including setting a writing purpose, conducting a literature review, collecting and analyzing data, and presenting information in the appropriate writing format. The course emphasizes the writing process, including drafting, composing, revising, editing, and publishing stages. Students will submit the final manuscript for publication or for a conference presentation.

**READ 8349 Research Practicum in Literacy**
This course focuses on preparing students to participate in a faculty-sponsored research project. Students must also complete an individual study, including a manuscript submission and conference presentation.

**READ 8350 Specialist Thesis I**
Prerequisite: completion of 27 hours of emphasis requirements or consent of instructor. Orientation to writing a thesis, including preparing a research proposal in the area of reading and conducting an extensive review of related literature in reading research.

**READ 8351 Specialist Thesis II**
Prerequisite: READ 8351. Completion and defense of thesis project.

**READ 8399 Doctoral Seminar**
Advanced topics in reading and language arts selected by the instructor in consideration of the needs and interests of doctoral students. Research and seminal works are analyzed and interpreted. Research designs, procedures and findings are discussed. Student must be admitted to Ph.D. program or have permission of instructor.

**READ 9199-9999 Dissertation**
Prerequisites: completion of all course work; consent of instructor. Development of a doctoral-level dissertation.
Master of Education in Secondary Education

The Master of Education in Secondary Education provides proficiency in professional education, curriculum and instruction, teaching skills, and a teaching specialty. Two tracks are offered within the master’s degree program: the initial licensure track, and the provisional initial licensure track.

Admission Requirements

Please also see specific admission requirements for the Initial Licensure track and the subject advisor for content area-specific admissions requirements.

Regular Admission Criteria

- Baccalaureate degree from a regionally accredited institution with a cumulative GPA of at least 2.75 (4.0 scale), or
- Grade point average of 3.0 for the last 60 hours of undergraduate courses, or
- Grade point average 3.0 in the content major, or
- Master’s degree from a regionally accredited institution with a cumulative GPA of at least 3.0.

Conditional Admission

- Baccalaureate degree from a regionally accredited institution; a cumulative undergraduate GPA of no lower than a 2.5; and a General Record Exam (GRE) score of at least 144 on the Verbal Scale, 141 on the Quantitative Scale, and 3.5 on the Analytical Writing Scale, or
- Completion of at least 12 semester hours of graduate course work in another UALR graduate program or graduate program from another regionally accredited college or university with a cumulative GPA of at least 3.0 and no grade lower than a B.

Initial Licensure Track Admission Requirements

(In addition to the requirements for regular or conditional admission)

- Baccalaureate or equivalent degree in one of the following teaching specialty areas: art; drama/speech; English language arts; life/earth science; physical/earth science; mathematics; vocal music; business technology; social studies; health and physical education, music, art, or foreign language; subject to areas approved by the Arkansas
Department of Education.
- Graduate Record Examination (GRE) scores as required by the Graduate School. Please note: If you are applying for conditional admission to the Initial licensure Track because your grade point average is lower than a 2.75 (but no lower than a 2.5), you must take the Verbal, Quantitative, and Analytical Writing sections of the GRE.
- Praxis CORE scores of 150 in mathematics, 156 in reading, and 162 in writing.
- Candidates who have completed the baccalaureate degree and lack no more than 12 hours in the specialty area may be admitted to the program and may complete deficiencies concurrently with a master’s program.
- Interview with faculty.

Legal Requirements Prior to Field or Internship Placements

Students who apply to the Secondary Education program must complete the following requirements and submit documentation to the Field Placement Office in the College of Education and Health Professions prior to field or internship placements:

- Proof of liability insurance. This insurance is provided through the School Workers Defense Program or by joining the Student Arkansas Education Association (SAEA).
- A negative tuberculosis test (Health card is available through the Arkansas Department of Health.)
- Criminal records check: state civil record check must be completed and submitted to advisor.
- Completion of the Criminal Background Disclosure
- Before being recommended for licensure and placement, candidates must complete a criminal records check, state civil record check, and FBI record check. The student is responsible for the fees associated with these checks.

Initial Licensure Track

The initial licensure track in Secondary Education is for those who have a baccalaureate (BA, BS) degree from an accredited institution with a major in a subject area taught in secondary schools and who want to prepare to be teachers. This track leads to licensure in a teaching specialty. All courses are offered in the evening. Some courses require a field placement in a local school.

Title II definitions now require that program completers pass required assessments in addition to completion of the courses on the student’s degree plan. Students in the initial licensure track of the M.Ed. in Secondary Education are required to pass state required Praxis II assessments as of spring 2001.

Initial Licensure Track Program Requirements

EDFN 7320 Advanced Educational Psychology or
SCED 5321 Adolescent Development and Diversity or
EDFN 7330 Human Development
EDFN 7370 Educational Assessment
SCED 7103 Supervised Clinical Teaching
SCED 7106 Instructional Skills Practicum
SCED 7201 Curriculum Design
SCED 7202 Specialized Instructional Methods
SCED 7302 Trends and Issues in the Secondary School
SCED 7304 Action Research Project or EDFN 7303 Introduction to Research
SCED 7306 Instructional Skills and Classroom Management
SCED 7601 Internship (Must pass Praxis II Content before application approval)
SPED 7204 Adolescents with Special Needs
SPED 7301 Foundations of Special Education
Six hours of electives in the content area, education, or technology

Initial Licensure Track Graduation Requirements

- A minimum of 36 graduate credit hours with a GPA of at least 3.0
- A portfolio accepted by committee
- Passing scores on all Praxis II examinations required by the Arkansas Department of Education

Provisional Initial Licensure Track

State Requirements for the Provisional License

A candidate must meet the following criteria to be considered for the provisional license:

- Be fully admitted to the UALR Graduate School and in good standing in an educational program of study (graduate secondary education) and continually be taking classes. If the candidate drops out of the program or discontinues taking classes, the candidate will be reported to the State Department of Education.
- Pass the Praxis CORE and Praxis II content exams.
- Complete and clear background checks. (Police and FBI)
- Complete the application for the provisional license. NOTE: Completion of application does not guarantee approval. All sites must be approved by the associate dean of the College of Education and Health Professions.
- Secure a mentor from the employing school. The school will assign the mentor. The candidate must have the mentoring form included in the licensure packet sent to the State Department for the provisional license application.
- Complete Arkansas History (if the candidate is in social studies) prior to being recommended for a provisional license.

Contact the Certification Coordinator for information on the Praxis, background check, and the provisional license.
Retention Requirements for Both Tracks

Once admitted, students are required to maintain a 3.0 grade point average with at least a grade of B in all Secondary Education (SCED) courses. This includes all courses associated with the licensure/degree plan. In addition, the student’s professional behavior, content knowledge, and classroom performance will be evaluated throughout the program.

Successful completion of the licensure program is not based solely on the number of course credits but requires demonstration of specified professional knowledge, skills, behaviors, and dispositions. Once the student has begun the program, periodic evaluations will assess progress. Failure to progress satisfactorily might result in a student being removed from the program. While a student may require additional time to meet some performance expectations, the faculty may limit that time and reserves the right to drop a student from the licensure program should appropriate progress not be demonstrated.

Graduate Certificate in Secondary Education

Students wishing to receive a graduate certificate in special education will complete 21 graduate hours.

Admission Requirements

Students must meet the same admission requirements as those who apply for the master's degree program.

Program Requirements

SCED 7202 Specialized Instructional Methods
SCED 7103 Supervised Clinical Teaching
SCED 7306 Instructional Skills and Classroom Management
EDFN 7330 Human Development
SPED 7303 Adolescents with Special Needs
EDFN 7370 Educational Assessment
SCED 7601 Internship

Graduation Requirements

- Minimum of 21 graduate credit hours
- Minimum 3.0 GPA with no grade below B
- Praxis II content pedagogy exam or Principles of Learning and Teaching passed

Courses in Secondary Education

**SCED 7104 Curriculum Design Practicum**
Prerequisite: SCED 7306. Co-requisite: SCED 7201. A field placement centered around a technology-enriched environment. Preprofessionals work with students in a facilitative learning environment that includes students with special needs. Inquiry and problem-based teaching strategies are observed. Preprofessionals focus on technology in teaching and learning strategies and digital equity.

**SCED 7105, 7205, 7305 Independent Study**  
Prerequisite: consent of instructor. Offered on demand.

**SCED 7106 Instructional Skills Practicum**  
Co-requisite: SCED 7306. Observing and assisting Master teachers and testing candidate’s knowledge and selected skills of instruction, and management in metropolitan, multicultural secondary school classrooms.

**SCED 7201 Curriculum Design Seminar**  
Prerequisite: SCED 7306. Co-requisite: SCED 7104. This course emphasizes the development of content specific and integrated thematic curricula. Students will develop teaching units that address the inclusion of students with special needs. Inquiry and problem-based teaching strategies will be modeled. The internet and technology as an integrative tool will be utilized to develop pedagogical techniques and materials in relation to whole course design with cross-disciplinary focus and active student involvement. All projects and assignments will be posted to the SCED 7201 discussion list for peer collaboration and review.

**SCED 7202 Specialized Instructional Methods**  
Co-requisite: SCED 7103. Objectives, philosophy of the subject field as applied to secondary education; consideration of issues, research in the content areas; application of adaptive and unique instructional strategies, methods to specific areas.

**SCED 7301 Secondary School Curriculum**  
Theory, practice of the secondary school program; includes patterns of organization, techniques for development, overview of secondary curriculum trends, issues, current status as a whole and in each subject field; curriculum specialists in subject areas assist with instruction, development of applicable curriculum.

**SCED 7302 Trends and Issues in Secondary Education Seminar**  
Co-requisite: SCED 7201 or TCED 7303. A study of trends and issues pertaining to the goals, analysis of the teacher’s role in dealing with current concerns in these areas.

**SCED 7304 Action Research Project**  
Co-requisite: SCED 7302. (Topic chosen with and approved by project advisor at least four weeks before registration.) Student designs, implements research project on a topic addressing educational issues in multicultural and mainstreamed secondary school environments; requires written report and oral defense before committee. (Projects by in-service teachers are usually conducted in their own classes).
SCED 7306 Instructional Skills and Classroom Management
Co-requisite: SCED 7106. Students develop pedagogical techniques, activities, and assessments that encourage and promote learning. This course also includes the study, analysis, and development of teaching, human relations and management models, skills, and techniques, which are tested in the practicum.

SCED 7601 Internship
Prerequisite: 21 hours completed in the program, including SCED 7201, and passing scores on Praxis II Content. Co-requisite: SCED 7302. Students spend a full semester in a secondary school, under supervision of a secondary cooperating teacher or mentor and a University supervisor, observing, teaching, participating in activities involving the school, community.
Master of Education in Special Education

The Master of Education in Special Education (SPED) prepares candidates as teachers of students with disabilities. Special Education teachers address the professional challenge of designing instruction that meets the needs of children and youth with disabilities. Special Education offers emphases in the following areas.

Early Childhood Special Education (birth – 4th grade)

The early childhood special education emphasis prepares teachers and early interventionists to provide developmental and educational services to children (birth through fourth grade) with disabilities and to their families. Graduates should be eligible for Arkansas Teacher Certification in Special Education-Early Childhood. For more information about this program, visit the website.

Instructional Specialist 4-12

The special education emphasis in teaching students in grades 4-12 allows candidates to focus on the area of study for the appropriate age group. It is a non-categorical preparation program. Graduates of the Instructional Specialist 4-12 are prepared to work with students as well as collaborate with professionals in the school environment. Emphasis is placed on assessment and intervention as well as designing appropriate learning environments for students with various disabilities. For more information about this program, visit the website.

Admissions Requirements

Regular and Conditional Admission

All applicants must have:

- A valid standard teacher license (Arkansas or other state); contact advisor for exceptions.
- Favorable recommendations from faculty in the program.

Regular Admission (additional requirements)

- Baccalaureate degree from a regionally accredited institution with a cumulative GPA of at
least 2.75. (4.0 scale)
or
- Grade point average of at least 3.0 for the last 60 hours of undergraduate courses.
or
- Master’s degree from a regionally accredited institution with a cumulative GPA of at least 3.0.

Conditional Admission

- Baccalaureate degree from a regionally accredited institution; a cumulative undergraduate GPA of no lower than 2.5; and a Graduate Record Exam (GRE) score of at least 144 on the Verbal Scale, 149 on the Quantitative Scale, and 4.5 on the Analytical Writing Scale
or
- A candidate may complete at least 12 semester hours of graduate course work in another UALR graduate program or graduate program from another regionally accredited college or university with a cumulative GPA of at least 3.0 and no grade lower than a B.

Program Requirements for All Emphases

All candidates must satisfy the specific common core competencies for special education along with performance standards established for specialty areas. Each emphasis requires a portfolio of scholarship as a culminating experience. Candidates in the MEd in Special Education program are required to pass state required Praxis II assessments. Specific requirements for each emphasis are listed below. Special education courses are listed at the end of the section.

Graduation Requirements for All Emphases

- Cumulative GPA of at least 3.0 on an approved program of study as outlined in the emphasis section.
- Prepare and present a proficient or above exit portfolio of scholarship.
- All candidates must pass Praxis II exam 20354, Special Education: Core Knowledge and Applications.

Individual emphasis areas may have additional graduation requirements.

Early Childhood Special Education

Program Requirements

Individuals seeking admission to this emphasis area must contact the program advisor prior to admission or enrollment. The following outline is not intended as a tool for students to self-advise. The special education degree with an emphasis in early childhood requires 33 credit hours, including 24 education core area hours, 9 specialization hours, and 6 supervised practicum
hours. Candidates must present a portfolio of scholarship and maintain a 3.0 GPA.

Education Core Area Courses

- SPED 5343 Disability Law
- SPED 7301 Foundations of Special Ed.
- SPED 7302 Technology in Special Ed.
- EDFN 7303 Introduction to Research
- SPED 7305 Managing the Learning Environment
- SPED 7309 Seminar in Special Education
- SPED 7351 Assessment in Special Education
- SPED 7390 Assessment in SPED Practicum

Specialization Courses

- **SPED 5312 Medical Problems**
- **SPED 7342 ECSE Assessment / Intervention**
- **SPED 7350 Introduction to Educational Research**

Instructional Specialist in Special Education 4-12

Program Requirements

The instructional specialist in special education 4-12 emphasis consists of 36 graduate hours and a portfolio presentation. In order to be admitted to the program, a candidate must hold at least an initial teaching license in either elementary, middle childhood, or secondary education. The instructional specialist license is an endorsement and can only be attained after a person acquires a standard education teaching license.

Special Education Core Courses

- **SPED 5343 Disability Law**
- **SPED 7301 Foundations in Special Education**
- **SPED 7302 Technology and Special Education**
- **EDFN 7303 Introduction to Research**
- **SPED 7305 Managing the Learning Environment**
- **SPED 7309 Seminar in Special Education**
- **SPED 7351 Assessment in Special Education**
- **SPED 7390 Assessment in SPED Practicum**

Instructional Specialist 4-12 Core Courses

- **SPED 7351 Assessment and Instructional Design I**
- **SPED 7352 Assessment and Instructional Design II**
- **SPED 7353 Transition and Life Adjustment**
Courses in Special Education

**SPED 5202, 5302 Workshop**
Offered on demand.

**SPED 5214 Early Childhood Special Education Assessment Field Experience**
This is the first experience in a series of two supervised field experiences. During the 120 clock-hour experience, student field experiences emphasize assessment and early intervention assessment activities related to child find/screening, translating assessment activities in the intervention environment and assessments surrounding health and safety issues, children with health and/or sensory impairments, social development, and challenging behavior.

**SPED 5216 ECSE: Inclusion Field Experience**
This is the final experience in a series of supervised field experience designed for students in the Early Childhood Special Education emphasis. The field experiences included in this 120 clock-hour experience examine assessment to intervention activities related to all areas of development, technology adaptations in intervention, the link between individualized intervention plans and instructional planning, and continuous documentation of child performance.

**SPED 5266 Language in Deaf Children II**
Language development in normal-hearing, hearing-impaired children; relationships between the two populations; relationship of learning theory, cognitive and psychosocio-linguistic principles, other perspectives to language learning, hearing-impaired children; language instruction for teaching language to hearing-impaired children; normal language development, language acquisition theories, and language and cognitive research; includes directed observation.

**SPED 5311 Managing the Learning Environment B**
Prerequisites: graduate candidates entering with the graduate endorsement only option and must be admitted to the Graduate School. Theory, research, and application for classroom management. Current issues and research in applied behavior analysis and other forms of classroom management; cognitive, behavioral, and emerging management procedures; emphasis will be placed on the application of research. Positive approaches to classroom and behavior management.

**SPED 5312 Medical Problems in Child Development**
The primary concern of the course is to review medical conditions and events arising during prenatal, postnatal and early childhood which contribute to the nature and cause of major educational disabilities. Special attention is given to syndromes associated with mental retardation, disorders of the central nervous system, infections disease, and a wide range of conditions placing children at risk for developmental delays. Emphasis is directed toward early medical identification, prevention of secondary disabilities, and strategies for responding to chronic health conditions in educational settings. Guest lectures by physicians and other health related professionals are an integral part of the course.
SPED 5313 Early Childhood Special Education Assessment
This is the first course in a two-course sequence addressing assessment and early intervention screening and assessment strategies for young children with disabilities, ages birth through eight. A specific focus will be given to the fundamental principles of and strategies for assessment, the role of well-baby and early intervention providers in screening and assessment process for disabilities. Candidates will learn to identify the needs of children related to health and/or sensory impairments, the identification of abilities in the developmental domains. Various aspects of the early environments are examined and procedures for gathering performance data are explored.

SPED 5315 Early Childhood Special Education: Methods of Inclusion
This is the second course in a two-course sequence addressing intervention strategies for young children with disabilities, ages birth through age eight. Specific attention is given to application of assessment principles into programming, the role of child find in providing services, the needs of young children with health and/or sensory impairments, strategies for identifying behavioral support needs and techniques for fostering social-emotional development. Attention will also be given to methods of including children with disabilities in the general education setting.

SPED 5317 Introduction to Inclusion in Early Childhood Special Education
Prerequisites: PSYC 1300, an introductory human development course, or consent of the instructor. Psychological, sociological, philosophical, legal, educational implications of educating exceptional learners; necessary adaptations for exceptional learners in the mainstream setting; role of teachers, professionals, parents as team members providing education for exceptional learners.

SPED 5330 Severe Disabilities
Prerequisites: admission to the program; SPED 4301, EDFN 3320, READ 3320, READ 3322, TCED 3383. This course focuses on current best practices in curriculum, and methods for students with severe disabilities, including specific strategies for teaching students with severe disabilities, general strategies for working with heterogeneous groups of students in inclusive settings, and methods for adapting the general education curriculum to include students with severe disabilities in elementary, middle, and high school.

SPED 5343 Disability Law
The purpose of the course is to provide students with the basic understanding of the legal and ethical issues that impact assessment, eligibility, placement, and delivery of services of students with disabilities. The focus will be on the due process procedures and elements of Free Appropriate Public Education (FAPE) necessary for successful teaching of students with disabilities as found in Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act of 1973 and Americans with Disabilities Act (ADA).

SPED 5360 Psychological Aspects of Deafness
Theory, research in the psychological development, adjustment of hearing-impaired children, adults; includes intellectual, cognitive, perceptual, social, personality development; adaptation to
hearing loss; educational, mental health, rehabilitation implications of research findings with single disability, multi-disabled, hearing impaired persons.

**SPED 5367 Communication Methods with Hearing-impaired Children in the Educational Setting**
Prerequisite: Interpreting 4320/5320 or consent of instructor. Corequisite: Special Education 4264, 4266. Practical application of the multiplicity of methods; research, underlying theories of language acquisition by hearing-impaired children; emphasis on application to teaching English, other academic subjects. Offered in fall.

**SPED 7103 Teaching Adolescents with Exceptionalities**
The legal, foundational, and ethical aspects of serving adolescents with disabilities are provided. Specialized knowledge related to the development of special education at the secondary level as well as current legal and statutory issues. Psychological, sociological, philosophical, and educational implications of educating adolescent exceptional learners are introduced.

**SPED 7123 Technology for Students with Visual Impairments**
History of technology for individuals with visual impairments; types of technology for individuals with visual impairments; role of technology in education of students with visual impairments; hands-on experience with selected technology tools for students with visual impairment and their teachers.

**SPED 7141 ECSE Clinical I**
Co-requisite: SPED 7341. This is the second experience in a series of three supervised practica. During the 120 clock hour experience, student field experiences emphasize assessment and intervention activities related to child find/screening, the intervention environment, health and safety issues, children with health and/or sensory impairments, social development, and challenging behavior.

**SPED 7142 ECSE Clinical II**
Co-requisite: SPED 7342. This is the third and final experience in a series of three supervised practica designed for students in the Early Childhood Instructional Specialist emphasis. The 120 clock hour field experiences included in this experience examine assessment and intervention activities related to all areas of development, technology adaptations in assessment and intervention, the link between individualized intervention plans and instructional planning, and continuous documentation of child performance.

**SPED 7144 Collaboration in the Field**
Co-requisite: SPED 7344. This is the first experience in a series of three supervised practica for students in the Early Childhood Instructional Specialist emphasis. This course emphasizes practical use of specialized knowledge and application of program performance standards. During the 120 clock-hour practicum, field experiences emphasize teams and the team process, communication skills, collaboration strategies, consultation and professionalism. Activities will be conducted with family members and a variety of related service disciplines.
**SPED 7154 Physical and Health Management**
This course will focus on health management practices for students with disabilities. Students will become familiar with emergency first aid and universal health care precautions, health management plans, guidelines for the administration of medications and the side effects of medication, procedures for managing seizures, treatments for allergies and asthma, and use of gastrostomy tubes. Students will also be given information on proper body mechanics and on positioning and physical management of students with motor disabilities. Taken with SPED 7206 Strategies for Family Involvement.

**SPED 7190, 7290, 7390 Supervised Practice**
Prerequisite: consent of instructor. Practical use of skills, competencies from courses; working under faculty supervision with individuals with disabilities being served in education and/or rehabilitation settings. Offered on demand.
SPED 7191, 7291, 7391 Independent Study
Prerequisite: consent of instructor. Offered on demand.
SPED 7193, 7293, 7393 Special Topics
In-depth study of selected interest in a special education emphasis area.

**SPED 7203 Adolescents with Exceptionalities**
Enhances knowledge regarding the characteristics, identification, and assessment of adolescents with disabilities. Necessary adaptations for adolescent exceptional learners in the inclusion setting; role of teachers, professionals, parents as team members in identification, assessment and program and instructional design components are presented. Candidates acquire skills needed to support the implementation of behavior intervention and transition plans.

**SPED 7206 Strategies for Family Involvement**
This course will prepare candidates to work with families of students with disabilities. The candidates will identify the impact of disabilities on families and family functioning. Strategies for communicating with families and for involving families in the process of program development and assessment will be included.

**SPED 7292 Field Experience I**
Prerequisite: SPED 7305. The general goal of this course is to build upon the knowledge and skill candidates have gained regarding the characteristics of and service to and evaluation of a variety of learners with disabilities. Procedures for identification and placement of students for special education will be identified and evaluated. Candidates will develop profiles of students who are classified as at risk for developing learning problems and students with varying disabilities and identify instructional support suitable for implementing with non at risk students. Candidates are encouraged to take this course concurrently with SPED 7351.

**SPED 7295 Field Experience II**
Prerequisites: Successful completion of SPED 7351 Assessment and Instructional Design I and SPED 7292 Field Experience I. It is suggested that this course be taken in conjunction with SPED 7352. Assessment and Instructional Design II. Candidates will engage in specific implementation
of strategies for students with various learning problems in field sites. Candidates will design and use various informal assessments and analyze them for their application in the pre-referral, referral, evaluation, and IEP development process.

**SPED 7296 Field Experience III**
Prerequisites: Successful completion of SPED 7352 Assessment and Instructional Design II and SPED 7295 Field Experience II with a co- requisite of SPED 7353 Transition and Life Adjustment. This course will expand the application skills developed in the methods classes and SPED 7353. Candidates will use interventions and evaluation skills to assess students, design an intervention plan, implement intervention programs, and evaluate interventions for students with a variety of disabilities. Emphasis will be placed on students in grades 4-12, students with more significant involvement, and post school functioning.

**SPED 7301 Foundations of Special Education**
This course surveys the foundations of educational programs for students with disabilities, emphasizing the historical, philosophical, and legal aspects of special education. Course work includes surveys of the characteristics and needs of students with various disabilities.

**SPED 7302 Technology in Special Education**
This course will prepare candidates to be better able to respond to individuals’ functional needs in order to enhance their access to the general or special education curricula. Candidates will identify and use technology for instruction, assist students with school related tasks and help students communicate and help students function better in their environment.

**SPED 7305 Managing the Learning Environment**
Theory, research, and application for behavioral management. Current issues and research in applied behavioral analysis and other forms of classroom management; cognitive behavioral and emerging management procedures, emphasis on application of research.

**SPED 7309 Seminar in Special Education**
Prerequisite: Completion of core emphasis course work, graduate standing. This course explores issues of contemporary importance to the profession, affords students the opportunity to engage in scholarly activities and high-level discussions with professors and is the final event in the candidate’s program of study where earlier knowledge becomes integrated and expanded. This course is to be taken in the final six hours of study.

**SPED 7333 Characteristics and Educational Needs of Children with Severe Disabilities**
Intellectual, behavioral, physical characteristics of individuals with severe disabling conditions; includes models of social management, history of treatment of persons with severe disabilities, major considerations of educational services delivery to such persons.

**SPED 7335 Instructional Methods for Persons with Severe Disabilities**
Fundamentals of systematic data-based instructional skills needed to teach persons with severe disabilities in classroom, community environments.
SPED 7336 Advanced Instructional Methods for Teaching Persons with Severe Disabilities
Prerequisite: Special Education 7335 or consent of instructor. Identification of intervention strategies; design of effective programs for teaching age-appropriate, functional living skills to individuals with severe disabilities.

SPED 7339 Vocational Instruction for Persons with Handicaps
Vocational programming methods; emphasis on current “best practices” in instruction, program delivery; includes use of supported work model for systematic instruction in integrated community job sites.

SPED 7340 Trends and Issues in Early Childhood Special Education
Prerequisite: exceptionality course. Includes state, federal laws governing, regulating early intervention programs; program models used in the field; emphasis on models emphasizing integrating children with disabilities and their peers without disabilities.

SPED 7351 Assessment and Instructional Design I
Prerequisites: SPED 7305 and should be taken in conjunction with SPED 7295. The general goal of this course is to build upon the knowledge and skill students have gained regarding the characteristics of a variety of learners with disabilities. Specific emphasis will be placed on developing skills to serve learners with disabilities, identify and evaluate relevant formal and informal assessment strategies that contribute to the identification, placement, and instructional planning for students with learning problems.

SPED 7352 Assessment and Instructional Design II
Prerequisites: successful completion of SPED 7351 Assessment and Instructional Design I and SPED 7390, Practicum in SPED It is required that this course be taken concurrently with SPED 7390 Practicum in SPED. The general goals of this course are to expand upon the knowledge and skills developed in course work and field experiences gained in Assessment and Instructional Design I and to enfold the knowledge and skills into specific implementation for students with various learning problems. Candidates will evaluate various formal and informal assessments for use in curriculum development and adaptation. Particular emphasis will be placed on candidate competency in instructional design and analysis. Candidates will modify and adapt curriculum for inclusive settings.

SPED 7353 Transition and Life Adjustment
Prerequisite: SPED 7352 Assessment and Instructional Design II. This course presents information regarding the transition and life adjustment of persons with disabilities. The focus is on the development and implementation of transition plans for adolescents with disabilities and children with more significant disabilities. Candidates will develop mechanisms for self-advocacy development and access to services available to adults with disabilities.

SPED 7360 Characteristics and Educational Needs of the Severely Emotionally Disturbed
Serious emotional disturbance and its educational implication; includes significant historical
factors; theoretical orientations to definition, etiology of serious emotional disturbance; classification systems; learning characteristics, their educational implications; interdisciplinary appraisal, therapies; federal, state legislation, litigation relating to serious emotional disturbance and education.

**SPED 7361 Methods for Teaching the Seriously Emotionally Disturbed**
Prerequisite: Special Education 7360 or consent of instructor. Instructional principles, intervention strategies; includes major education models; identification of education needs, development of Individualized Education Program; classroom design for self-contained, resource class at elementary, secondary levels; student progress evaluation.

**SPED 7362 Direct Teaching of Social Skills in Children and Youth**
(Oriented to educators.) Contemporary models; emphasis on classroom-based instruction; includes key social learning aspects; social integration; teaching social skills deficits; instructional materials, procedures; language for building comprehensive social skills programming, outcomes evaluation into Individualized Education Programs.

**SPED 7365 Individualized Education Programs**
Prerequisite: graduate standing. Identification, evaluation, perspective programming process in education of exceptional children; includes Arkansas special education general program standards; components of comprehensive, interdisciplinary appraisal; categorical eligibility criteria; referral, placement, appeal procedure; development of Individualized Education Programs, IEP process conferences; report writing.

**SPED 7366 Exceptionalities in the Classroom**
Prerequisite: graduate standing. Recognition of exceptionalities, educational implications; techniques for elementary teacher in identifying exceptionalities in regular classroom. Offered on demand.

**SPED 7390 Assessment in Special Education Practicum**
Prerequisites: SPED 7305. Students are encouraged to take this course concurrently with SPED 7351.
The goal of this practicum is to develop knowledge and skills in assessment techniques unique to Special Education. Students will have opportunities to select, administer, and interpret scores from formal, informal, and criterion referenced tests. Candidates also will engage in specific observational assessments. Emphasis will be placed on translating assessment information into programming recommendations. Students will develop profiles of students with or at risk for developing learning problems and students exhibiting a range of disability characteristics and identifying instructional support suitable for implementing with actual students.
Audiology

Admissions | Program Requirements | Graduate Courses

Suite 600, University Plaza, (501) 569-3155

Doctor of Audiology

The Profession

Audiologists are healthcare professionals who are experts in the non-medical management of the auditory and balance systems. Audiologists evaluate hearing and hearing loss; recommend, fit, and verify personal amplification systems; and assist in school-based amplification decisions as well as many other activities. Graduates of this program are prepared for positions in a variety of professional settings including hospitals, private clinics, and private practices; community speech, language, and hearing centers; college and university programs; rehabilitation centers; residential institutions; school systems; and industrial settings.

The Program

The Department of Audiology and Speech Pathology offers a Doctor of Audiology (Au.D.) degree program through the College of Health Professions at the University of Arkansas for Medical Sciences in a consortium with the College of Education and Health Professions at the University of Arkansas at Little Rock. This unique educational consortium combines the academic and clinical resources of a major medical sciences campus with those of a large, comprehensive, metropolitan university. The Au.D. program is a full-time four year program with one cohort of nine students beginning each fall semester. It consists of a total of 11 semesters including three summers. The program’s mission, goals, and knowledge and skills acquisition (KASA) objectives can be found on the department website.

The curriculum is designed to emphasize the science of hearing, speech, and language; the acquisition of knowledge about human communication disorders; and the study and practice of methods for evaluation and treatment. Practicum experiences are provided in a number of different settings, primarily in the central Arkansas area. Students should expect to travel two to four hours away from central Arkansas for practicum experiences during their second and third years.

Performance-based examinations during the first and second summers in the program must be successfully completed to continue in the program. Successful completion of a comprehensive written and oral examination is required prior to placement for the 4th-year externship. Successful completion of a directed research project and a 4th-year externship are required prior to graduation.
Accreditation

The doctoral (Au.D.) education program in audiology at the University of Arkansas for Medical Sciences/University of Arkansas at Little Rock is accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association, 2200 Research Boulevard #310, Rockville, Maryland 20850. Telephone: (800) 498-2071 or (301) 296-5700.

Licensure and Certification

Successful completion of all program requirements qualifies the student to apply for national examinations required for licensure and/or certification. Graduates of the Au.D. program will be eligible to apply to the Arkansas Board of Examiners in Speech Pathology and Audiology for a license to practice audiology in the state. Graduates will also be eligible to apply for optional certification through the American Speech-Language-Hearing Association (ASHA) and/or the American Board of Audiology (ABA). Successful completion of the program does not itself ensure licensure and/or certification. It is the student’s responsibility to be familiar with licensure and certification requirements.

Admissions Requirements

Undergraduate coursework in mathematics (college algebra or higher) and in biological, physical, and behavioral sciences is required. Although there are no prerequisite courses in audiology or speech pathology, the program does require that all students have one course in phonetics and one in language acquisition. If these are not completed prior to admission, they must be completed during the first year of study for the program.

Two program tracks are offered to students: a post-bachelor’s degree track and a post-master’s degree track.

Post Baccalaureate/Pre-Professional

Students must have earned at least a bachelor’s degree from a regionally-accredited college or university. This track is designed to be completed in four years (including three summers with a common entry point in the fall). Exceptions to these timelines may occur on an individual basis. All work must be completed within eight calendar years of initial admission. A minimum of 118 semester credit hours are required for completion of the Au.D. degree.

Post-Master’s

Students applying for admission to the Au.D. program in the post-master’s degree track must have earned at least a master’s degree from a regionally accredited college or university. Admission to the post-master’s Au.D. degree program can occur in any semester. The time to complete the program will vary depending on individual requirements. All work must be completed within eight calendar years of initial admission. A minimum of 118 semester
credit hours are required for graduation (28 semester credit hours of clinical practicum will be waived for those who can provide proof of ASHA certification, and up to 30 semester credit hours may be transferred from ASHA accredited programs). Eligible applicants will have completed a master’s degree program in audiology, communication sciences and disorders, or the equivalent approved by the Council on Academic Accreditation of the American Speech-Language-Hearing Association (at least 36 semester credit hours of graduate level courses as specified by the department).

Proof of current state licensure in audiology and/or national certification in audiology (CCC-A or ABA) must be provided at the time of application. The date of the GRE must be within five years of application. Coursework and practicum requirements will be determined on an individual basis based on the applicant’s experience. A research project will be required if evidence of satisfactory completion of a master’s thesis is not provided (completion of a master’s level research project will not satisfy the research requirement). Contact the department for more specific requirements.

Application Procedures

All application materials must be received by February 1 to be considered for fall admission. No applications will be reviewed after this date. Early application is strongly recommended.

Application procedures require applicants to mail documentation to two different addresses. The application for admission, nonrefundable application fee, official transcripts, and official GRE scores should be mailed to the CHP Welcome Center at College of Health Professions, University of Arkansas for Medical Sciences, 4301 West Markham Street #619, Little Rock, AR 72205-7199. The letter of interest, three completed recommendation forms, and resume should be sent to AUSP Audiology Admissions Committee, UALR- Audiology and Speech Pathology, 2801 S. University Avenue Suite 600 UP, Little Rock, AR 72204.

Applicants must provide:

1. Application for Admission
2. Application Fee: A non-refundable application fee of $40.00 is required and must accompany the CHP application.
3. Official Transcripts: Arrange for each college or university attended to forward an official transcript to the CHP Admissions Office. Transcripts provided to CHP must be official; i.e., sent directly to CHP from the issuing institutions(s). A transcript “issued to the student” or received from the student or anyone else is not acceptable.
   - A minimum cumulative and major GPA of 2.85 is required to apply for admission. Applicants whose bachelor’s degree is not completed at the time of application will be considered for admission; if accepted, the applicant must submit a supplementary transcript showing completion of the degree before registration.
4. GRE Scores: Arrange for an official copy of the General Test of Graduate Record Examination
(GRE) to be sent to the UAMS College of Health Professions: Institution Code 6146. Scores will include verbal, quantitative, and writing.

5. Letter of Interest: Submit a letter (business format, 12-pt font, and less than two pages) to the Audiology Admissions Committee addressing the following items:
   A. An explanation of your interest in audiology
   B. Your long-term and short-term goals
   C. Other information you deem relevant to the committee’s decision-making.

6. Resume: Submit a 1 page resume listing relevant educational credentials, honors, awards, activities, work history, etc. with the cover letter.

7. Interview

8. Recommendation Forms: Three recommendation forms are required. The form is available from the Au.D. Admissions Packet on the program website. Recommendations should be from professors with whom you have worked and who are familiar with your ability and academic performance. Supplemental letters are optional.

Admissions Factors

Arkansas residency will be considered during selection for admission. Applicants are considered without regard to race, color, gender, age, sexual orientation, religion, national origin or disability status as a criterion in deciding against any individual in matters of admission, placement, transfer, hiring, dismissal, compensation, fringe benefits, training, tuition assistance, and other personnel or educationally-related actions.

Program Requirements

(Post-Baccalaureate Track)

A minimum of 118 semester credit hours are required for completion of the Au.D. degree. The following four-year (11 semester) 119 SC sample degree plan demonstrates a program that meets the 118 semester credit hours minimum.

Fall (14 Semester Credit Hours)

AUSP 7380 Basic Diagnostic Audiology
AUSP 7331 Anatomy and Physiology of the Auditory and Vestibular Systems I
AUSP 7332 Acoustics and Psychoacoustics
AUSP 7321 Instrumentation in Audiology and Speech Pathology
AUSP 7V91 Audiology Practicum*
AUSP 7181 Clinical Laboratory

Spring (14 Semester Credit Hours)

AUSP 7381 Advanced Diagnostic Audiology
AUSP 7336 Anatomy and Physiology of the Auditory and Vestibular Systems II
AUSP 7326 Outcomes Research and Evidence-Based Practice
AUSP 7384 Amplification
AUSP 7V91 Audiology Practicum*
AUSP 7181 Clinical Laboratory

Summer (8 Semester Credit Hours)
AUSP 7224 Genetics of Hearing Loss
AUSP 7228 Professional Issues in Audiology and Speech Pathology
AUSP 7V91 Audiology Practicum*
AUSP 7181 Clinical Laboratory
AUSP 7320 Cultural Competence in Audiology

Fall (15 Semester Credit Hours)
AUSP 7334 Pediatric Audiology
AUSP 7181 Clinical Electrophysiology
AUSP 7360 Research Methods in Communication Disorders
AUSP 7351 Amplification II
AUSP 7V91 Audiology Practicum*
AUSP 7181 Clinical Laboratory

Spring (15 Semester Credit Hours)
AUSP 7385 Pediatric Amplification and Intervention
AUSP 7383 Medical Audiology
AUSP 7386 Audiologic Rehabilitation: Adult
AUSP 7350 Evaluation and Treatment of the Balance System
AUSP 7V91 Audiology Practicum*
AUSP 7181 Clinical Laboratory

Summer (7 Semester Credit Hours)
AUSP 7229 Audiology Practice Management
AUSP 7V94 Independent (Directed) Research*
AUSP 7V91 Audiology Practicum*
AUSP 7181 Clinical Laboratory

Fall (14 Semester Credit Hours)
AUSP 7371 Gerontology in Audiology
AUSP 7330 Educational Audiology
AUSP 7325 Implant Device Technology
AUSP 7V94 Independent (Directed) Research*
AUSP 7V91 Audiology Practicum*
AUSP 7181 Clinical Laboratory
*Note: Classes where the hours are variable are shown with a “V” as the second number.

Spring (14 Semester Credit Hours)
AUSP 7333 Auditory Processing
AUSP 7227 Hearing Conservation
AUSP 7365 Counseling in Communication Disorders
*AUSP 7V94 Independent (Directed) Research
AUSP 7291 Audiology Practicum
AUSP 7181 Clinical Laboratory

Summer (5 Semester Credit Hours)
*AUSP 7V94 Independent (Directed) Research (if not complete)**
AUSP 7491 Clinical Externship (Practicum)
AUSP 7181 Clinical Laboratory

Fall (7 Semester Credit Hours)
*AUSP 7194 Independent (Directed) Research (if not complete)
AUSP 7691 Clinical Externship (Practicum)
AUSP 7181 Clinical Laboratory

Spring (7 Semester Credit Hours)
*AUSP 7V94 Independent (Directed) Research (if not complete)**
AUSP 7091 Clinical Externship
AUSP 7181 Clinical Laboratory

**Total Semester Credit Hours 120**
*Note: Classes where the hours are variable are shown with a “V” as the second number.
**Not included in total.

This coursework represents a minimum of 72 semester credit hours of classroom coursework, six semester credit hours in independent (directed) research with successful completion of a research project, 11 semester credit hours of clinical laboratory, 11 semester credit hours of practicum, and 12 semester credit hours of clinical externship during the final academic year.

Performance-based examinations at the end of each academic year must be successfully completed to continue in the program. Written examinations at the end of the first and second academic years must be passed to continue in the program. Successful completion of a comprehensive written and oral examination is required prior to placement for the 4th-year externship experience.
Courses in Audiology

The first number listed for courses is for the UAMS College of Health Professions; the second (in parenthesis) is for the University of Arkansas at Little Rock.

**AUD 5013 (AUSP 7360) Research Methods in Communication Disorders**
Introduction to research methodologies in audiology and speech pathology. Includes prospectus development, funding sources, data collection and analysis, and professional research writing and editing in communicative disorders and/or speech sciences.

**AUD 5023 (AUSP 7380) Basic Diagnostic Audiology**
Principles and techniques for basic audiologic evaluation, including pure tone testing, speech audiometry, and the clinical application of masking, immittance, and otoacoustic emissions. Relevant calibration issues will also be discussed.

**AUD 5033 (AUSP 7370) Educational Audiology**
The delivery of audiology services to a school-based population. Includes the development, management, and utilization of hearing and middle ear system screening programs, classroom acoustics, selection and fitting of classroom-based amplification, and federal laws associated with children who have special needs.

**AUD 5041 (AUSP 7181) Clinical laboratory**
Lab instruction in clinical procedures and methods for evaluation and treatment of clients and care, maintenance and use of technology in audiology clinical practice. Perform evaluation and rehabilitation procedures under faculty supervision.

**AUD 5043 (AUSP 7331) Anatomy and Physiology of the Auditory and Vestibular Systems I**
Detailed information of the anatomy, physiology, electrophysiology, and neurophysiology of the auditory and vestibular systems.

**AUD 5053 (AUSP 7332) Acoustics and Psychoacoustics**
Basic information regarding the physics of sound, the measurement of sound and an introduction to the psychoacoustic basis of hearing and its clinical applications.

**AUD 5063 (AUSP 7333) Auditory Processing**
Theoretical overview, differential assessment, and treatment of adults and children with auditory processing disorders (APD). Intended to blend theoretical knowledge with practical clinical methods and techniques. Prerequisites: AUD 5023 (7380).

**AUD 5073 (AUSP 7381) Advanced Diagnostic Audiology**
Principles of and techniques for advanced audiometric evaluation, including speech audiometry, reflex decay, audiometric special tests and otoacoustic emissions. Report writing and making appropriate recommendations will also be discussed.
AUD 5083 (AUSP 7382) Clinical Electrophysiology
Principles and techniques in the use of evoked potentials to assess auditory function. Includes case studies and analysis of waveforms. Lecture and laboratory.

AUD 5103 (AUSP 7383) Medical Audiology
Introduction to the major pathologies of the auditory and vestibular systems, as well as medical/surgical treatment of those pathologies. Audiologic assessment and management of the disorders will also be discussed. Prerequisites: AUD 5023 (7380) and AUD 5043 (7331).

AUD 5112 (AUSP 7321) Instrumentation in Audiology & Speech Pathology
Designed to introduce students to basic principles of electronics and electrical safety and to proper use and care of equipment used in the evaluation and treatment of the auditory and vestibular systems. Two credit hours.

AUD 5123 (AUSP 7335) Advanced Psychoacoustics
Advanced information regarding how listeners with normal hearing and those with hearing loss process sound. Topics include: loudness, frequency selectivity, temporal processing, pitch perception, space perception, object/pattern perception, speech perception, experimental design, and signal detection theory. Prerequisites: AUD 5053 (7332).

AUD 5132 (AUSP 7222) Speech Perception
This course is designed to examine the perception and production of speech sounds and the prosodic features of speech. Several theories of speech perception will be presented and discussed, and the effects of hearing loss on speech perception and production will be explored. Two credit hours. Prerequisite: Graduate student standing.

AUD 5133 (AUSP 7367) Infant-Toddler Communication
Investigation of prelinguistic/early linguistic communication and feeding/swallowing development. Multidisciplinary assessment and intervention for infants and toddlers (birth to five) with special needs and their families. Current formal and information assessment tools and techniques, current intervention strategies, enhancing the therapeutic process across environments, utilizing team collaboration, and facilitating parent-infant interaction.

AUD 5143 (AUSP 7323) Advanced Electrophysiology
Principles and techniques in the use of mid- and late-evoked potentials to assess auditory function. Course includes case studies and analysis of waveforms. Laboratory assignments will be made. Two credit hours. Prerequisites: AUSP 7382 Clinical Electrophysiology.

AUD 5152 (AUSP 7261) Organization and Administration of Clinical Programs
AUD 5153 (AUSP 7334) Pediatric Audiology
Normal auditory development and theoretical, clinical, and practical issues involved in screening, assessment, and management of children with hearing loss. Prerequisite: AUD 5023 (7380).

AUD 5162 (AUSP 7224) Genetics of Hearing Loss
Basic information on the genetic basis of hearing loss and an overview of syndromic and non-syndromic hearing losses. Strategies for referral to genetic counselors and other health care professionals will be included. Prerequisites: AUSP 7383 Medical Audiology.

AUD 5163 (AUSP 7320) Auditory Based Intervention
Auditory-based speech/language intervention is based on a normal neurological developmental model aimed at maximizing the child’s use of his/her residual hearing to communicate. The focus of this course is to provide information about current amplification and implant technology and to detail auditory-based principles, strategies, and techniques used to facilitate spoken communication.

AUD 5173 (AUSP 7365) Counseling in Communication Disorders
Principles of counseling for working with persons with communication disorders and their families throughout the life span. Students review major theories of counseling and select those most useful for the various settings and practices of audiology and speech pathology. Students demonstrate their understanding of the counseling process through case presentations.

AUD 5183 (AUSP 7326) Outcomes Research and Evidence-Based Practice
Provides students with understanding of the principles of outcomes research, and the levels of evidence supporting clinical practice. Students will understand the principles of critical evaluation of diagnostic procedures and critical evaluation of the evidence for treatment efficacy and effectiveness as well as the importance of practice guidelines that define best practices. Two credit hours.

AUD 5192 (AUSP 7230) Cultural Competence in Audiology
Knowledge and skills needed by audiologists to provide culturally competent services to diverse clients. Sources of diversity and application of concepts to the field of audiology will be discussed.

AUD 5193 (AUSP 7336) Anatomy and Physiology of the Auditory and Vestibular Systems II
Continuation of the first anatomy and physiology course with greater focus on skull anatomy and on peripheral and central nervous system embryology, neuroanatomy, and neurophysiology.

AUD 520V (AUSP 7V87) Topics in Audiology
Emphasis on topics related to clinical or rehabilitative audiology. May be repeated for up to six hours. Prerequisite: consent of instructor.

AUD 5212 (AUSP 7227) Hearing Conservation
Noise measurement, OHSA requirements, occupational noise management, recreational
audiology, and designing and implementing hearing conservation programs for adults and children. Prerequisites: AUD 7221 Instrumentation; AUD 7380 Basic Diagnostic Audiology. Two credit hours.

**AUD 5222 (AUSP 7228) Professional Issues in Audiology & Speech Pathology**
Personal and professional ethical values and their applications to dilemmas encountered in the clinical practices of speech pathology and audiology will be explored with students. Preferred practices and criteria for quality services will be topics for discussion. Two credit hours.

**AUD 5223 (AUSP 7384) Amplification**
Prerequisite: AUSP 7380 Basic Diagnostic Audiology. Theory and practice in effective use of hearing aids, auditory training equipment; includes their component parts, electro-acoustic analysis, hearing aid orientation and counseling, approaches to hearing aid evaluation.

**AUD 5232 (AUSP 7229) Audiology: Practice Management**
Provides students with a broad understanding of the roles of audiologists in meeting the needs of the communicatively impaired. Students will understand preferred practices, criteria for quality services and quality improvement through the evaluation of service delivery models and exploration of the laws affecting service delivery in health care and educational settings. Two credit hours.

**AUD 5233 (AUSP 7385) Pediatric Amplification and Intervention**
Advanced strategies specific to pediatric hearing assessment, applicable technologies and management utilizing a family centered approach to intervention. Prerequisites: AUSP 7380, 7381.

**AUD 5243 (AUSP 7386) Audiologic Rehabilitation**
Adult Principles of audiologic rehabilitation for adults, including diagnosis, counseling, use of amplification and other assistive devices, and communication strategies. Various models of audiologic rehabilitation presented with students presenting case studies demonstrating the basic procedures underlying each model.
Communication Sciences and Disorders

University Plaza, Suite 600, (501) 569-3155

Master of Science in Communication Sciences and Disorders

The Master of Science in Communication Sciences and Disorders program prepares students for professional positions in hospital clinics, rehabilitation centers, schools, residential institutions, private practices, and other settings working with persons with disorders of cognition, hearing, speech, receptive and expressive language, pragmatics, literacy, voice, swallowing, and fluency. The track currently offered is in speech language pathology. The curriculum emphasizes the speech, language, and hearing processes; knowledge about human communicative disorders; and evaluation and treatment methods. Practicum experiences are available in the departmental speech and hearing clinic and at a wide variety of area sites. Professional speech-language pathologists may, with the instructors’ consent, take program courses for continuing education units. For more information, visit the program’s website.

The UALR Department of Audiology and Speech Pathology conducts this Master of Science program in consortium with the University of Arkansas for Medical Sciences. The program has strong clinical support from the John L. McClellan Memorial Veterans Hospital, Department of Audiology and Speech Pathology, and other cooperating clinics and agencies in the Little Rock area. The program is accredited in the area of speech pathology by the Council on Academic Accreditation (CAA) through the American Speech-Language-Hearing Association (ASHA). The Department is also a sponsor for ASHA continuing education credits.

Admission Requirements

Admission to the program is through the UAMS Graduate School and requires a baccalaureate degree in Speech Pathology from an accredited institution. Students whose degrees are not in communicative disorders or speech pathology must complete a sequence of 30 hours of pre-professional communicative disorders courses before admission to the graduate program. Complete admission information is available from the Admissions Committee chairperson in the UALR Department of Audiology and Speech Pathology or by visiting the UAMS Graduate School website.

Program Requirements

The Master of Science in Communication Sciences and Disorders requires a minimum of 49 semester credit hours. Within this 49-hour requirement, students complete either 3 hours of independent research or six hours of thesis. Speech-language pathology students are enrolled in a practicum each semester of the program. All students must pass a comprehensive examination
during before graduating from the program. All students must complete the academic and practicum requirements for the ASHA Certificate of Clinical Competence (CCC).

### Graduation Requirements

- Successful completion of an approved program of study as outlined above, including a passing score on the comprehensive examination
- Successful completion of academic and supervised practicum requirements for Certificate of Clinical Competence in Speech-Language Pathology

### Courses in Communication Sciences and Disorders

**AUSP 7092 Independent Research**  
Prerequisite: AUSP 7360 Research. Three hours may be applied toward degree requirements if approved and a letter grade is given. Repeated registration is permitted though additional hours may not be applied to the total semester credit hours needed to complete the degree UAMS course ASP 536V.

**AUSP 7093 Topics in Speech Language Pathology**  
Special projects or topics related to procedures and instrumentation, theoretical foundations, assessment, clinical or rehabilitative speech-language pathology. May be repeated for up to nine hours. UAMS course ASP 513V.

**AUSP 7091 Practicum**  
Applied supervised practicum experiences for graduate students that encompass the breadth of the current scope of practice with both adults and children. UAMS course ASP 540V.

**AUSP 7193 Independent Study in Communication Disorders**  
Prerequisites: Consent of the instructor. Directed readings in audiology and/or speech/language pathology, individual discussion with a faculty member. May be repeated for up to 6 hours of credit. Offered as needed. UAMS course ASP 530V.

**AUSP 7261 Organization and Administration of Clinical Programs**  
Organization, administration, and accreditation of school, university, and community programs. Private practice and billing procedures. Various and alternative career opportunities including corporate speech pathology practice. Issues related to Medicaid, Medicare, and other third party payors as well as current legislation, governmental, and professional practice issues. UAMS course ASP 5152.

**AUSP 7261 Organization and Administration of Clinical Programs**  
Organization, administration, and accreditation of school, university, and community programs.
Private practice and billing procedures. Various and alternative career opportunities including corporate speech pathology practice. Issues related to Medicaid, Medicare, and other third party payers as well as current legislation, governmental, and professional practice issues. UAMS course ASP 5152.

**AUSP 7270 Fluency Disorders**

Procedures, theories, and therapeutic techniques in treating various types and degrees of stuttering and cluttering in adults and children. UAMS course SAP 5122.

**AUSP 7273 Neurogenic Speech Disorders**

Assessment procedures and intervention techniques for acquired neurogenic speech disorders in adults. Focus on dysarthria and verbal apraxia. UAMS course ASP 5192.

**AUSP 7275 Craniofacial Speech Disorders**

An understanding of speech disorders often associated with craniofacial differences. Craniofacial development, relevant anatomy and physiology, as well as procedures for evaluation (both behavioral and instrumental) and treatment of craniofacial speech disorders. A team approach to care is emphasized. UAMS course ASP 5262.

**AUSP 7276 Voice Disorders**

Assessment procedures and rehabilitation techniques for voice disorders in children and adults. Instrumental and behavioral approaches, medical, and/or surgical treatment approaches. A team approach to care is emphasized. UAMS course ASP 5363.

**AUSP 7282 Learning Disabilities**

Introduction to the characteristics, definitions, etiologies, assessment, and therapeutic procedures in the treatment of children diagnosed with learning disabilities. Emphasis on the scope of practice for speech-language pathologist and audiologists in the due process procedures for these children. UAMS course ASP 5282.

**AUSP 7320 Auditory-based Speech/Language Intervention**

Auditory-based speech and language intervention with infants and toddlers who are deaf and/or hard of hearing. Emphasis is on the principles of the normal development sequence of listening skills, assessment of skills obtained within the hierarchy, and intervention aimed at teaching skills not yet acquired. Auditory-based intervention of infants and toddlers requires family participation; therefore, learning styles of parents and caregivers will be discussed. UAMS course ASP 5163.

**AUSP 7360 Research Methods in Communication Disorders**
Research methodologies in audiology, speech-language pathology. Includes prospectus development, funding sources, data collection, data analysis, professional research writing and editing. UAMS course ASP 5013.

**AUSP 7364 Language Assessment and Therapy**

Acquisition of first-language competence as related to language behavior. Includes the phonological, morphological, syntactical, and semantic components of language, Language deviation – emphasis on symptomology, etiology, evaluation, therapy. UAMS course ASP 5113.

**AUSP 7365 Counseling in Communication Disorders**

Principles of counseling for working with persons with communication disorders and their families throughout the lifespan. Students review major theories of counseling and select those most useful for the various settings and practices of audiology and speech pathology. Students demonstrate their understanding of the counseling process through case presentations.

**AUSP 7367 Infant-Toddler Communication: Development and Assessment**

Investigation of prelinguistic/early linguistic communication and feeding/swallowing development. Exploration of methods of multidisciplinary assessment and intervention for infants and toddlers (birth to five) with special needs and their families, current formal and informal assessment tools and techniques, current intervention strategies, enhancing the therapeutic process across environments, utilizing team collaboration and facilitating parent-infant interaction. UAMS course ASP 5133.

**AUSP 7368 Dysphagia**

Examination of normal oral, pharyngeal, and esophageal swallowing function in adults and children, including neurology, physiology, and the effects of aging. Swallowing disorders discussed, with an emphasis on oral and pharyngeal function. Various methods of evaluation considered, as well as current management and treatment options. UAMS course ASP 5213.

**AUSP 7270 Fluency Disorders**

Procedures, theories, and therapeutic techniques in treating various types and degrees of stuttering and cluttering in adults and children. UAMS course ASP 5122.


**AUSP 7372 Advanced Articulation Disorders**

Functional, organic articulation disorders. Includes variables related to articulation, assessment, diagnosis of articulation disorders; therapeutic habilitation procedures with clients exhibiting misarticulations. UAMS course ASP 5183.
AUSP 7374 Introduction to Auditory-Based Intervention

The role of audition in early language development to support reading outcomes. Emphasis is on establishing a rich linguistic environment at home and at school to facilitate emergent literacy.

AUSP 7385 Audiologic Rehabilitation: Children

Audiometric evaluation procedures and the habilitation/rehabilitation of infants and children with hearing loss. Emphasis is placed on the determination of appropriate remediation, language, and speech therapy, auditory training, and counseling parents for home programming.

AUSP 7386 Aural Rehabilitation: Adults

Principles of audiologic rehabilitation for adults, including diagnosis, counseling, use of amplification and other assistive devices, and communication strategies. Various models of audiologic rehabilitation presented. UAMS course ASP 5243.

AUSP 7392 Multicultural Issues

Systematic analysis cultural similarities and differences. Examine verbal and nonverbal cultural differences in the clinical setting. UAMS course ASP 5293.

AUSP 7396 Advanced Differential Diagnosis of Speech and Language Disorders

Comparative study in differential diagnosis of speech, language disorders in children and adults. Use and interpretation of standardized assessment procedures. UAMS course ASP 5273.

AUSP 8000 Thesis

Prerequisites: AUSP 7360. Students must take six hours total, one to six hours per semester. UAMS course ASP 600V.
Communication Sciences and Disorders

University Plaza, Suite 600, (501) 569-3155

Doctor of Philosophy in Communication Sciences and Disorders

(With the University of Arkansas for Medical Sciences and the University of Central Arkansas)

The Department of Audiology and Speech Pathology offers the Doctor of Philosophy degree in consortium with the College of Education and Health Professions at the University of Arkansas at Little Rock, the College of Health Professions at the University of Arkansas for Medical Sciences, and the College of Health and Applied Sciences at the University of Central Arkansas. The Arkansas Consortium for the Ph.D. in Communication Sciences and Disorders combines the academic and clinical resources of a major medical sciences campus with those of two large, comprehensive universities. The curriculum is designed to emphasize the science of speech, language, and hearing, the acquisition of knowledge through research about human communicative disorders, and the advanced study and practice of methods for evaluation and treatment of those disorders. This unique curriculum recognizes the importance of teaching and supervision pedagogy consistent with best practices.

The consortium structure offers the opportunity for interdisciplinary research in both medically-oriented sites and in conventional university campus locations. The program prepares graduates for teaching and research through course work and internships in grant writing, teaching, and clinical supervision as well as research- and discipline-specific areas of study.

Admission Requirements

The consortium accepts applications for admission to the program for both full- and part-time students. Students may apply and be admitted to the Ph.D. program each semester but fall application is encouraged. Students enrolled in the consortium program full time must enroll in at least nine semester credit hours during the fall or spring semesters. Full time requirements for summer vary depending upon financial aid status. Part time students must enroll in a minimum of five semester credit hours each semester. Admission to the program is made by application through the UAMS Graduate School and a program application. A graduate degree in speech-language pathology and/or audiology is preferred. Admission to the Ph.D. program is competitive and based on the following factors:
Communication Sciences and Disorders - 2015-2016 Graduate Catalog

- Academic achievement and aptitude
- Written and oral communication
- Personal endorsement

Complete admission requirements and processes are located on the program [website](#).

**Program Requirements**

A minimum of 70 credits of specified course work is required by individuals who currently hold a master’s degree in speech-language pathology or audiology. Within the 70 hour requirement, students complete a minimum of:

- Nine hours of statistics
- Three hours of advanced research methods
- Six hours of a research project (pre-dissertation)
- 18 hours in doctoral dissertation research

The Ph.D. will be awarded to those candidates who successfully complete all required course work (including any additional courses deemed necessary by the candidate’s graduate committee). The semester and year of course offerings vary based on student need. The curriculum emphasizes the development of research skills and advanced study of communication sciences and disorders. Students must pass a comprehensive examination and successfully defend their dissertations. Degrees are awarded upon successful completion of all academic and research requirements.

**Graduation Requirements**

- Successful completion of an approved program of study as outlined above
- Successful completion of comprehensive examinations
- Successful completion of the dissertation and dissertation defense

**Courses in Communication Sciences and Disorders**

**AUSP 8109 Grant Writing Internship**

This course involves the development, completion and submission of a grant proposal to a private or public funding agency. UAMS-ASP 6091; UCA-SPTH 7110.

**AUSP 8111-8211 Supervision Internship**

This course provides doctoral students with supervised experience in clinical supervision/instruction. UAMS-ASP 611V; UCA-SPTH 7102-7602.

**AUSP 8123-8223 Teaching Internship**
This course provides doctoral students with supervised experience in academic instruction. UAMS ASP 610 This course will engage students in discussions of multicultural and linguistic variables that must be recognized and applied in teaching, research, and clinical supervision in the field of speech-language pathology and audiology. UAMS ASP 610

AUSP 8131-8631 Research Project

This course covers skills necessary to complete a research project consisting of research questions, review of the literature, methodology, IRB approval, data collection, analysis of data, and written report. UAMS ASP 604V; UCA SPTH 7103-7603.

AUSP 8205 Grant Writing Pedagogy

This course covers strategies for identifying funding agencies appropriate for research and special programs. Techniques for writing grant proposals for both private and public funding will be emphasized. UAMS-ASP 6052; UCA-SPTH 7210.

AUSP 8206 Supervision Pedagogy

Exploration of the art and science of clinical teaching, supervision of clinical services, management of clinical programs, and instruction in communication disorders. Specific emphases will target clinical problem solving, maximizing student and client feedback, supervisory conferencing, evaluating student and client performance, clinical scheduling/record keeping, and clinical and program efficacy. UAMS ASP 6062; UCA-SPTH 7220.

AUSP 8207 Teaching Pedagogy

Principles and practices of course development and teaching skills in communication sciences and disorders. Emphases on understanding and integrating course content, targeted levels of learning, specific objectives, instructional strategies, and assessment. Additional topics include: motivating students, attributes of good teaching, professional development in teaching, distance education, and team/interdisciplinary teaching. UAMS-ASP 6072; UCA-SPTH 7230.

AUSP 8301 Doctoral Seminar in Hearing

The exploration of research and practice related to hearing science and hearing disorders. Course reflects recent developments in the literature and interests of participants. Topics may include: the anatomical basis of hearing science, acoustics and instrumentation, psychoacoustics, physiological acoustics, evaluation of hearing, hearing conservation, amplification, and aural habilitation and rehabilitation. May be repeated for 15 hours. UAMS ASP 6013; UCA SPTH 7310.
AUSP 8302 Doctoral Seminar in Speech

The exploration and evaluation of research, practice, and technology related to speech development and disorders. Course reflects recent developments in literature and interests of participants. Topics may include: motor speech disorders, speech science, physiological and neurophysiological bases of speech production, voice, dysphagia, fluency, articulation, craniofacial anomalies, gerontology, AAC, multicultural issues. May be repeated for 15 hours. UAMS ASP 6023; UCA SPTH 7330.

AUSP 8303 Doctoral Seminar in Language

The exploration and evaluation of current research, practice, and technology related to language development and disorders. Course reflects recent developments in the literature and specific interest of participants. Topics may include: developmental disorders, neurophysiological bases of language and communication, neurogenic cognitive-linguistic disorders, phonology, AAC, multicultural issues, gerontology. May be repeated for 15 hours.

AUSP 8304 Advanced Research Methods

Theory, principals and practices of research design in communication sciences and disorders. Emphases on methodology of collecting, organizing, analyzing and presenting qualitative and quantitative data. Topics will include: research questions and problems, literature and background review, research design, data organization and manipulation, scientific writing, and the publication and presentation process. UAMS-ASP 6003; UCA-SPTH 7300.

AUSP 8343 Multicultural Issues

This course will engage students in discussions of multicultural and linguistic variables that must be recognized and applied in teaching, research, and clinical supervision in the field of speech-language pathology and audiology. UAMS course UAMS ASP 6083; UCA SPTH 7321.

AUSP 9199-9999 Dissertation

An original research project is completed by the student in collaboration with the dissertation advisor and committee. The student must be able to successfully complete an oral defense to the dissertation committee. Students must continue to enroll in this course until all related requirements are completed. UAMS ASP 700V; UCA SPTH 8150-8950.
Gerontology

Admissions | Program Requirements | Graduate Courses

Ross Hall, Room 411, (501) 569-3240

The graduate Gerontology program equips students with the knowledge and skills to work with the burgeoning population of older adults in the 21st century. The Gerontology program is housed in the School of Social Work and focuses not only on skills needed to work with aging individuals and their families but also with the greater social issues that impact older adults. The Gerontology program is interdisciplinary and is designed to serve professionals in a range of occupations, including social workers, rehabilitation counselors, administrators, health care workers, health educators, and attorneys, as well as professionals from the business sector.

Graduate Certificate in Gerontology

The Gerontology program offers a graduate certificate (18 credit hours). The certificate is designed to provide professionals with knowledge of the biological, sociological, and psychological aspects of the aging process as well as an understanding of the social policies and services that respond to the needs of the older adult.

The Gerontology program interfaces with other graduate programs, allowing students to develop interdisciplinary skills to enhance their careers in gerontology. The curriculum includes classroom learning through traditional, online, and blended course offerings and hands-on experiences that meet the personnel needs of both public and private agencies.

Admission Requirements

Option A

The certificate may be completed in conjunction with the MSW or any other graduate degree. Students already enrolled in another graduate program should also apply to the Gerontology certificate program. MSW students may use the courses taken in the certificate program for their required electives. Students in other graduate programs will need to submit the courses for acceptance as electives to their departments. UALR policy allows up to 12 hours of graduate credit to be applied toward joint degrees.

Option B

Students not in a graduate program but wishing to obtain a certificate should apply to the UALR Graduate School and select the Gerontology certificate. An overall GPA of 2.7 or a GPA of 3.0 in the last 60 hours and proof of immunization are required for regular admittance into the certificate program. Once accepted, students must maintain a 3.0 GPA to remain in the program.
Gerontology (GERO) courses are open to all students with graduate standing as electives or as the 18 hour certificate in Gerontology.

Program Requirements

The certificate program requires the 12 core credit hours in Gerontology. The certificate requires an additional six hours of approved elective credit for a total of 18 credit hours.

The certificate requires 18 graduate-level hours. The following courses (12 hours) are required:

GERO/SOWK 5310 Social Gerontology
GERO/SOWK 7320 Health and Biology of Aging
GERO/SOWK 7321 Aging and Social Policy
GERO 7322 Assessment and Care Management of Older Adults*

Certificate students choose six hours of elective credit. Approved elective courses include:

GERO 5315 Interdisciplinary Health Care of the Elderly
GERO/SOWK 5336 Social Aspects of Death and Dying
GERO/SOWK 5337 Adult Development and Aging
GERO/SOWK 7323 Social and Emotional Implications of Illness and Disabilities
SOWK 8159 and 8259 Evaluation Research
SOWK 8218 and 8191 Loss and Grief
SOWK 8309 Intergenerational Family Therapy
SOWK 5330 Animal Assisted Therapy
SOWK 8346 Family in Late Life

*In lieu of GERO 7322, social work students may substitute Foundations I and II, or Advanced Direct Practice I or II.

Graduation Requirements

Cumulative GPA of at least 3.0 on an approved program of study as outlined above.

Courses in Gerontology

GERO 5310 Social Gerontology
This course explores the social aspects of aging–how do older adults affect society and how does society affect older adults? The interaction of older adults with society is examined along with many of our social institutions such as family, healthcare, government, and the economy. Also examined are the issues associated with our aging population and how those issues affect people of all ages. A number of current controversies associated with our changing population structure will be discussed in class.
**GERO 5315 Interdisciplinary Health Care of the Elderly**
Healthcare components, team-taught, with segments presented by faculty from numerous fields; includes clinical considerations, social gerontology, processes of aging, communication disorders, dental problems, medication, psychology, nutrition, preventive health care, radiography.

**GERO 5336 Social Aspects of Death and Dying**
Gerontology and social work seek to apply knowledge from the social sciences, medicine, and the humanities with the skills and values of the helping professions. The multidisciplinary study of death (thanatology) itself comes out of studying these different disciplines. There are many social, psychological, philosophical, and religious theories concerning the passage of death—for both ourselves and those around us. We will study many diverse contributions in the social aspects of death and dying.

**GERO 5337 Adult Development and Aging**
This course emphasizes the life course perspective as it looks at adult development and aging within the context of the social environment. Aspects of “successful aging” that will be examined cover growth and development from emerging adulthood to old age, and the impact that culture, gender, ethnicity, and individual differences have on these processes. Human development and aging is examined during early adulthood, middle adulthood, and late adulthood. We will study aspects of development that are common to persons at all ages across the life course, individual differences in development, and differences that characterize the separate age cohorts.

**GERO 7320 Health and Biology of Aging**
Prerequisite: graduate standing. Understanding the consequences of aging and the extension of life expectancy requires the concurrent understanding of the interrelationship of biology and behavior. Research on “normal” aging over the lifespan offers the potential of understanding the changes that occur with age so that we can use this understanding to anticipate and cope with those physiological and behavioral functions altered by aging in ourselves and as caregivers. The course will examine physiological and epidemiological studies of disease and aging as well as the alteration in sensory perception, muscle function, etc. Finally, the issues of interventions, realistic expectations, and ethics will also be examined.

**GERO 7321 Aging and Social Policy**
Prerequisite: graduate standing. This course offers an overview of aging and social policy issues, especially at the state and federal levels of government. Non-governmental agencies and organizations are also included. The aging network, healthcare including Medicare and Medicaid, as well as Social Security and retirement financing are highlighted. The course begins with a historical perspective on how we have gotten to our present health care policies. It then describes the aging network as well as the programs and services for the older adult that comprise this network.

**GERO 7322 Assessment and Care Management of the Older Adult**
Prerequisite: graduate standing. Assessment and Care Management with the Older Adult will offer students a comprehensive review of the emerging professional practice of Geriatric Care
Management (GCM). Throughout this course students will review a variety of geriatric assessments as well as study case management tools such as engaging, assessing, planning, intervening, evaluating and terminating client cases. Critical thinking as an ethical professional will be emphasized as well as beginning interviewing skills.

**GERO 7323 Social and Emotional Implications of Illness and Disabilities**
Prerequisite: graduate standing. Healthcare has become increasingly complex in the early 21st century. Those with a variety of developmental as well as acquired impairments and disabilities challenge the ability of society to mainstream a large minority of our citizens. An aging population with more chronic rather than acute health care needs is also a central concern. Finally, in the age of AIDS and other life threatening diseases, professional expertise in the psychological and social implications of illness and disability is a necessary skill. Professionals also have an increased responsibility to better understand the ethical as well as the bio-psycho-social-spiritual aspects of illness and disability in the individual, the family and the wider community.

**GERO 7350 Research Practicum**
Prerequisite: graduate standing, statistics and research methods courses or consent of instructor. Integration of research formulation, conceptualization, measurement, sampling design, and statistical analysis related to primary and secondary research. Student examines problems related to attitudinal, behavioral, ecological research by doing actual research projects.

**GERO 8310 Field Work I**
Prerequisites: 18 graduate hours, consent of advisor.

**GERO 8320 Field Work II**
Prerequisites: 18 graduate hours, consent of advisor.

**GERO 8630 Thesis**
Prerequisites: 24 graduate hours; consent of advisory committee. Scholarly investigation; primary or secondary analysis of data pertinent to student’s specialization track.
Master of Science in Health, Human Performance, and Sport Management

The Master of Science in Health, Human Performance, and Sport Management degree focuses on three graduate-study emphasis areas: (1) health education, (2) exercise science, and (3) sport management. This degree is designed to provide professional educational opportunities to interested students, health service professionals, teachers, researchers, corporate wellness/fitness coordinators, and sport/athletic management personnel throughout Arkansas and the nation.

These professionals will be employed in a variety of venues, including education settings, health care institutions, private health clinics, rehabilitation centers, businesses, fitness and wellness programs, athletic teams, and sport/athletic facilities. Students will have the opportunity to improve their intellectual and professional skills through advanced classroom instruction, participation in behavioral research, and community service learning activities.

Admission Requirements

The following materials should be submitted to the UALR Graduate School when applying to the program:

- Undergraduate transcript(s). Applicants are expected to have a baccalaureate degree from an accredited university. A 3.0 grade point average is generally expected.
- Graduate Record Examination (GRE) scores. Applicants are required to take the GRE General Test resulting in a minimum score at or above the 50th percentile.
- Reference letters. Applicants should obtain three letters of reference from college professors or individuals familiar with their academic work. Applicants should ask each writer of a reference letter to place the letter in an envelope, seal it, and sign across the seal. Applicants should collect the sealed reference letters and forward them to the UALR Graduate School.
- Letter of intent. Each applicant must submit a letter of intent describing the field or specialty within Health, Human Performance, and Sport Management for which training is sought and describing how the proposed training relates to the student’s career goals. Letters are not to exceed 500 words.

Applicants for admission to the M.S. in Health, Human Performance, and Sport Management program are evaluated on a competitive basis by the faculty, and acceptance is conferred to the
most qualified applicants. Fulfilling admission requirements is necessary to be considered for admission but in no way guarantees acceptance into the program. Students may be admitted in one of the admission status categories outlined in the [Graduate Catalog](#).

Application for admission should be received by the UALR Graduate School by March 15 for students anticipating fall matriculation and October 15 for spring matriculation in order to get full consideration for admittance. Applications received after these dates will be considered as long as program openings remain available. Students who do not meet the above requirements for admission may apply to the Department of Health, Human Performance, and Sport Management for a faculty review of their qualifications.

**Transfer Credit**

Subject to faculty approval, a combined maximum of 12 semester credit hours of transfer credit and/or credit taken as a special student may be applied to the degree. Successful completion of course work taken as a special student does not guarantee acceptance into the program.

**Program Requirements**

Master of Science in Health, Human Performance, and Sport Management students must complete nine hours of core requirements as well as twenty-seven hours in a chosen area of emphasis (Health Education, Exercise Science, or Sports Management), as follows:

**Core Requirements (9 hours)**

All students seeking a Master of Science in Health, Human Performance, and Sport Management must complete the following three core courses:

- HHPS 7301 Research Methods in Health Sciences
- HHPS 7302 Basic Statistics in Health Sciences
- HHPS 7303 Evaluation of Health Programs

**Health Education Emphasis (27 hours)**

In addition to the nine core hours, students seeking an emphasis in Health Education must complete 21 hours from the following courses as well as a thesis or project (six hours), including the following:

- HHPS 7310 Theoretical Foundations of HLED
- HHPS 7311 Concepts & Methods HLED
- HHPS 5430 Epidemiology

**Electives (8 hours)**
Health, Human Performance and Sport Management - 2015-2016 Graduate Catalog

HHPS 7699 Thesis Preparation (six hours) plus HHPS 7313 Advanced Stats for HHPS (three hours),
or HHPS 7698 Project Preparation (six hours) plus HHPS 7314 HLED Curriculum Development (three hours).

Exercise Science Emphasis (27 hours)
In addition to the 9 core hours, students seeking an emphasis in Exercise Science must complete 21 hours from the following courses as well as a thesis or project (6 hours):

- HHPS 7320 Curriculum Development in PE
- HHPS 7321 Advanced Motor Learning
- HHPS 7322 Admin of PE & Sport
- HHPS 7323 Biomechanics
- HHPS 7324 Advanced Exercise Physiology

Electives (six hours)

- HHPS 7699 Thesis Preparation (six hours)
or HHPS 7698 Project Preparation (six hours)

Sports Management Emphasis (27 hours)
In addition to the nine core hours, students seeking an emphasis in Sports Management must complete 21 hours from the following courses as well as a thesis or project (six hours):

- HHPS 7330 Management & Leadership in Sport Organizations
- HHPS 7331 Sport Law
- HHPS 7332 Planning & Management of Facilities
- HHPS 7333 Issues & Ethics in Sport Management
- HHPS 7334 Sport Marketing
- HHPS 7335 Event Development & Management
- HHPS 7336 Fiscal Management of Sport Organizations

Electives (3 hours)

- HHPS 7699 Thesis Preparation (six hours)
or HHPS 7698 Project Preparation (six hours)

Graduation Requirements
Students must successfully complete 36 hours of approved courses, a comprehensive exam, and a thesis or project.
Courses in Health, Human Performance and Sport Management

**HHPS 5340 Adapted Physical Education K-12**
This course presents the philosophy and methods pertaining to the adaptation of physical education for handicapped and exceptional students. A basic knowledge of handicapped conditions and the complications thereof for participating in physical education along with classroom, laboratory and practical experience will be provided to increase the awareness of the handicapped and to facilitate the application of knowledge to real life situations. Three hours of lecture per week.

**HHPS 5350 Methods and Techniques of Teaching Physical Education 6-12**
Prerequisites: HHPS 3320, HHPS 3210, and HHPS 3310, or department approval. This course provides a detailed review of the analysis and application of the major responsibilities and competencies required for teaching physical education 6-12. Emphasis is on learning the State Standards for Physical Education, Wellness, & Leisure (SSPEWL) K-12 licensure requirements and preparation for the ETS PRAXIS Series exams. This is the designated capstone course for the BS in Health Human Performance and Sport Management: emphasis in Health and Exercise Science, Minor in Secondary Education. Dual-listed in the UALR Undergraduate Catalog as HSCI 4350. Three hours lecture per week. Three credits hours.

**HHPS 5371 Health Education Concepts and Applications**
Concepts, philosophy, applications in public, private, professional, commercial organizations that exist to improve, maintain health. Three hours lecture per week. Offered in fall on even years.

**HHPS 5373 Controversial Issues in Health Education**
Health issues as influenced by laws, public opinion, scientific knowledge; current controversial issues in health education. (Also offered each summer in conjunction with MidSouth Summer School on Drug and Alcohol Abuse, usually last full week in June.) Three hours lecture per week. Offered on demand.

**HHPS 5378 Organization and Administration of Health Education Programs**
Prerequisites: HHPS 2303 and HHPS 4380 or department approval. This course is designed to provide a foundation in the organization and management of community-based health education programs. The purpose of this course is to provide an introduction to the fundamental concepts of management, administration, and leadership, as well as demonstrate their application in a variety of health education, health promotion and wellness programs. Dual listed in the UALR Undergraduate Catalog as HHPS 4378. This course is not open to students with credit for HHPS 4378. Three hours lecture per week. Three credits hours.

**HHPS 5399 HHPS Special Topics**
Prerequisite: HHPS 2330. Selected topics in specialized areas of health education, human performance, and sport management. Course topics will be announced in advance. Three credit hour lecture course.
HHPS 5430 Epidemiology: Environmental & Health
The principles of health and environmental epidemiology are introduced with specific emphasis on its application to various health and environmental settings. Statistical methods used for analyzing health and environmental epidemiological data are introduced. Computer applications will be presented in lecture and laboratory sessions. The role of health and environmental epidemiology in anti-terrorism programs will be presented. Lectures will be supplemented with laboratory computer exercises, site visits, and field studies.

HHPS 7301 Research Methods in Health Sciences
This course provides an overview examination of research methods applicable to the study of individual and group behavior. The course will interface behavioral theory, research design and methods, and data analysis/interpretation. The course will serve as an introduction and practical guide to conducting and critically evaluating health sciences and health behavior research.

HHPS 7302 Basic Statistics in Heath Sciences
A study of fundamental statistical concepts and techniques including descriptive and inferential parametric/non-parametric tests.

HHPS 7303 Evaluation of Health Programs
This course is an introductory course in evaluation designed for practitioners. The course content includes rationales for evaluation; political, organizational, theoretical, and educational aspects of evaluation; and methods to implement a sound evaluation.

HHPS 7304 Introduction to Community and Public Health
This course will examine community and public health in the United States. The course provides an overview of diverse areas in public health that explores epidemiology, biostatistics, social and behavioral sciences, environmental health issues, financing and delivery of health care systems, and systems thinking.

HHPS 7310 Theoretical Foundations of Health Education
This course explores the role of theory in shaping research and practice in health promotion and education, as well as historical and ongoing interaction between health education and the applied social sciences.

HHPS 7311 Concepts and Methods of Health Education
Fundamental principles and practices of public health promotion including history, ethics, cultural competence, professional responsibilities, overview of theory and models, and selection and implementation of instructional methods.

HHPS 7313 Advanced Statistics for Health Science
This course will introduce students to applied multivariable, multivariate, and data modeling analyses approaches used in health sciences research. Successful completion of HHPS 7302 (or equivalent) and permission of instructor required for enrollment.
HHPS 7314 Health Education Curriculum Development
The major focus of this course is on curriculum development and program planning in health promotion and education on a micro level. Practical aspects of curriculum development and program planning are emphasized. Learning theory and learning styles are discussed as they relate to health education curricula and program planning.

HHPS 7320 Curriculum Development in Physical Education
This course focuses on the content and process of PK-12 Physical Education curriculum development for the public schools.

HHPS 7321 Advanced Motor Learning
This course focuses on the advanced study of principles/theories of human motor learning, behavior and performance.

HHPS 7322 Administration of Health, Physical Education and Sport
This course covers basic managerial theories and practices required to administer physical education and health programs in elementary schools, secondary schools, and athletic settings.

HHPS 7323 Biomechanics
This course is designed to provide an advanced study of biomechanical concepts and their application to human movement and sport skills.

HHPS 7324 Advanced Exercise Physiology
This course applies physiological principles to exercise circumstance and includes critical analysis of the effect of exercise on human physiologic function with in-depth examination of current literature.

HHPS 7325 Sports and Exercise Nutrition
Prerequisite: consent of the instructor. The Sports and Exercise Nutrition course is a study of the scientific basis of nutrition and diet on physical performance and health. Topics include energy metabolism, substrate utilization, and measurement of energy expenditure, thermoregulation, fluid balance, rehydration, weight control, eating disorders, ergogenic aids, meal planning and evaluation.

HHPS 7326 Lab Techniques in Exercise Science
This course focuses on collecting and analyzing human data using various measurement devices often utilized in exercise science settings. The primary focus is to teach students how to work with human subjects in a research setting with various measurement devices. Furthermore, this course will also review research methodologies specific to certain types of data collections.

HHPS 7327 Neuromechanics
This course focuses on neurophysiology and motor control of human movements, specifically focusing on the central and peripheral control systems and their interaction. This course also addresses how injuries of the head and spine and neuromuscular diseases (e.g., MS, CP,
Parkinson’s) affect human movement.

**HHPS 7330 Management and Leadership in Sport Organizations**
This course emphasizes the management and leadership components of sport organizations. Specifically, the course will focus on the means of improving performance and satisfaction within sport organizations. Several areas will be discussed such as developing goals, decision making, strategic planning, leadership styles, and human resource management with the objective of developing a management and leadership philosophy.

**HHPS 7331 Sport Law**
This course is a study of legal issues affecting the delivery of sport services; focuses on liability in sport activities.

**HHPS 7333 Issues and Ethics in Sports Management**
Students will study ethical theories, moral reasoning, and ethical decision-making, and their value for sport managers. The application of ethical decision-making approaches relative to the major issues currently facing sport managers, and their impact on the operation of sport programs will also be addressed.

**HHPS 7334: Sport Marketing**
Students will develop an understanding and skill in the marketing process as relates to promotion & public relations activities in physical education, athletics and commercial sport operations. Primary focus will be on the application of marketing principles to specific sport scenarios.

**HHPS 7336 Fiscal Management in Sport Organizations**
This course is intended to provide students a general overview of many of the traditional and innovative revenue acquisition methods available for sport managers. Initial class time is devoted to helping students understand the fundamentals of finance, accounting, and the application of key financial techniques utilized in the administration and operation of a business, including: ration analysis, cash flow management, budgeting, and general investment strategies. Subsequently, a large portion of the semester will cover a wide range of topics geared towards educating students to basic financial concepts and other financial issues related to the sports industry.

**HHPS 7337 Sport Facility and Event Management**
This course provides an overview of facility or venue planning and design for sport areas. Students will learn about several finance strategies used in financing facility development as well as risk management and safety concerns when developing and running sport venues and events. Students will learn the factors involved in managing sporting events.

**HHPS 7397 Independent Study**
Prerequisite: consent of instructor. The independent study course may be taken upon advisor recommendation on a specific topic of study. The course topic will be determined by the candidate’s advisor or to help fulfill program requirements for candidate’s graduation.
**HHPS 7698 Project**
All students must pass comprehensive examinations before enrolling in this course. Prerequisites for Health Education: HHPS 7301, 7302, 7303, 7310, 7311, 5430, 7314. Prerequisites for Exercise Science: HHPS 7301, 7302, 7303, 7320, 7321, 7322, 7323, 7324. Prerequisites for Sports Management: HHPS 7301, 7302, 7303, 7330, 7331, 7332, 7333, 7334, 7335. Project preparation is a mid-level research experience for master’s degree students who have elected the special project option. With the guidance of a research committee, the student will plan, conduct, and prepare a written and oral report on a specific master’s-level project containing some original research.

**HHPS 7699 Thesis**
All students must pass comprehensive examinations before enrolling in this course. Prerequisites for Health Education: HHPS 7301, 7302, 7303, 7310, 7311, 5430, 7313. Prerequisites for Exercise Science: HHPS 7301, 7302, 7303, 7320, 7321, 7322, 7323, 7324. Prerequisites for Sports Management: HHPS 7301, 7302, 7303, 7330, 7331, 7332, 7333, 7334, 7335. Thesis preparation is designed to provide students with graduate-level research experience. Under the direction of the student’s major advisor and graduate committee, the student will carry out original research to support her/his thesis.
Master of Social Work

The mission of the master’s program of the UALR School of Social Work is to prepare social workers for advanced practice and leadership roles who have the skills and knowledge to enhance individual, family, group, organization, and community well-being, to work for social and economic justice, and to meet the human service needs of Arkansas and the surrounding region.

The Master of Social Work (M.S.W.) program is offered in Little Rock. After completion of the foundation year, students choose one of two concentrations for their second academic year of study: advanced direct practice (ADP) or management and community practice (MCP). The M.S.W. curriculum consists of 60 hours of graduate work, including 32 foundation hours, 22 concentration hours, and six elective hours. Internships are an integral part of the curriculum design, totaling 18 hours of course work or 1200 practice hours by graduation (1000 hours for advanced-standing students). Advanced-standing students are given credit for 17 hours of graduate work and need 43 hours to graduate. For more information about the program, visit the following website.

Admission Requirements

- Baccalaureate degree with a liberal arts perspective from an accredited college or university.
- Overall GPA of 3.0 is required.
- Satisfactory scores on either the Graduate Record Exam (GRE) or Miller’s Analogy Test (MAT) taken within the last five years. Test scores must be received before an admission decision can be made.
- Narrative statement of professional orientation. (format included in the application packet)
- Acceptable references indicating a propensity for both academics and social work practice.
- Three form letters of reference from professional, academic, or volunteer associates. (forms included in the application packet)
  - Volunteer, employment, and other life experiences relevant to the career choice of social work.
- Official transcripts with degree posted prior to the student’s enrolling in a graduate level course.

Advanced Standing Applicants ONLY

- Must have a bachelor’s degree in social work (B.S.W.) from a CSWE-accredited undergraduate program with a cumulative GPA of 3.0.
Must have a 3.5 GPA in last 60 hours of undergraduate studies.
- Degree must have been awarded within the last seven years.
- Must submit a copy of all field/internship evaluations.
- Must submit a recommendation written by a faculty member of the applicant’s undergraduate social work program.

Graduate Assistantships
A limited number of graduate assistantships are available. Contact the admissions coordinator for information. Information on graduate assistantships can be located on the UALR Graduate School website.

Transfer of Credit
Only applicants from other Council of Social Work Education (CSWE) accredited graduate social work programs will be considered for transfer admission. The applicant must have an overall GPA of at least 3.0 in graduate work. No grade lower than a B will be accepted for credit. An official statement from the former school indicating the student is in good standing is required. The concentration year (28 hours) of graduate study must be completed at UALR.

Only one graduate-level course from the UALR MSW program, other departments at UALR, or other universities taken prior to the student’s beginning of core MSW courses at UALR may be considered for transfer as an elective course. Students must submit a request of transfer of credit at or before the time of their enrollment. The request should include a cover letter, which discusses the content of the course (other than UALR MSW courses) and its relevance to social work. A copy of the course outline shall be attached. This request should be addressed to the chair of the curriculum committee.

In the event that the curriculum committee accepts requests for transfer of credit, the application is forwarded to the Graduate School dean who then reviews the transfer of credit. Transfer grades are not computed as part of a student’s UALR cumulative GPA.

Stipends
A number of stipends are available to students in the School of Social Work. Contact the field coordinator for information.

Academic Credit for Life/Professional Experience
Academic credit is not given for life experience and/or previous work experience, in whole or in part, in lieu of the field internship or of courses in the professional foundation areas specified in the Curriculum Policy Statement.
Program Requirements

Internship

Internships are an integral part of the curriculum design. Students will have acquired a total of 1200 practice hours by graduation (1000 hours for advanced standing students). Through contact with clients and client systems in a helping relationship, students develop the requisite skills for social work practice. Full-time students are expected to complete the internship concurrently with other coursework. Part-time students are expected to complete field work in the fall and spring of their 2nd part time year. Students must have completed or be in the process of completing all foundation requirements when doing internship placement. Students must petition the MSW Practice Committee in order to complete a summer block internship or other internship time periods outside of the standard time period allotted in the degree plan. All internships are under the supervision of field faculty, and all field agencies are approved in advance by the MSW Internship Coordinator and the appropriate curriculum committees. Internship sites may include federal, state, and local government agencies; private, nonprofit organizations; and hospitals or other in-patient or out-patient facilities that work with or coordinate services for dysfunctional individuals, families, and groups. The agencies might be concerned with spouse or child abuse, physical or learning disabilities, long-term or terminal illness, drug or alcohol abuse, psychological disorders, juvenile delinquency, teen pregnancy, economic distress, or other forms of dysfunction. Agencies are approved on the basis of their ability to further the educational objectives of the program. Selection criteria include adequacy of the learning environment, availability of client populations, opportunity to work with community resources, and opportunity for participation with staff in the agencies’ organizational processes.

Curriculum Overview

The MSW program requires 60 credit hours and is divided into two academic years, the foundation year and the concentration year. Both years require an internship, which provides opportunities to apply classroom learning.

Foundation Year

The first academic year for full-time students or the first two years for part-time students is referred to as the foundation year which grounds students in the common body of knowledge, values, and skills of the social work profession transferable among settings, population groups, and problem areas. In the classroom, students are given content on social work values and ethics, diversity, social and economic justice, populations-at-risk, human behavior and the social environment, social welfare policy and services, social work practice, and research. In the internship, the student is expected to apply foundation knowledge, skills, values, and ethics to practice.

Concentration Year
The second year for full-time students or the third year for part-time students of the program prepares students for advanced practice with a concentration in advanced direct practice or management and community practice. Students gain additional knowledge and skills in their chosen concentration through internships and electives.

Advanced Direct Practice

Students who graduate from the advanced direct practice concentration have advanced skills in working autonomously and ethically with individuals, families, and groups in agency settings.

Management and Community Practice

Students who graduate from the management and community practice concentration are prepared with the conceptual, analytical, technical, and interpersonal skills needed for planning, organizing, coordinating, evaluating, and leadership associated with management and community practice in community-based programs, hospital social services, and state health and human service bureaucracies.

Program Options

There are three program options available to students pursuing an MSW degree. All programs are offered in Little Rock.

Full-time program

This program is designed for individuals who have a bachelor’s degree in a field other than social work. It is designed to be completed in two years. The UALR MSW program requires students to have a baccalaureate degree or meet the program’s liberal arts requirements (see admission packet) with a liberal arts perspective from an accredited college or university.

Part-time program

The part-time program is designed to be completed in three years, although a student may take up to four calendar years from the initial date of enrollment to complete the degree. A minimum of two courses must be taken each semester, with appropriate sequencing of courses as outlined in the curriculum. One of the goals of the part-time program is to develop opportunities for students who are employed in the human services to be able to complete their internships. Students in this part-time alternative would need support from their employing agencies for completing field work requirements. In an effort to make this equivalent to more traditional options for completing the program, some restrictions may apply to field work. It is important to note that the experiences of the work site internship should differ significantly from the current roles and responsibilities assumed by the student.

Advanced Standing Program

This program allows qualified students who have earned a bachelor of social work degree from an institution accredited by the Council on Social Work Education (during the previous seven years)
to complete the MSW degree in a shorter, concentrated program. This program may be completed on either a full-time (12 months) or part-time (21 months) basis.

Special Student Status

Some social work elective courses are open to interested individuals for professional advancement or enrichment. If an individual is later admitted to the social work program, enrichment. If an individual is later admitted to the social work program, one Social Work elective is transferable toward the MSW degree. Enrollment in these courses does not guarantee admission.

Graduation Requirements

- Satisfactory completion of approved program of study as outlined above
- At least 3.0 GPA in all core courses
- Faculty recommendation for degree

Courses in Social Work

**SOWK 5310 Social Gerontology**
Prerequisite: graduate standing. This course explores the social aspects of aging – how do older adults affect society and how does society affect older adults? The interaction of older adults with society is examined along with many of our social institutions such as family, healthcare, government, and the economy. Also examined are the issues associated with our aging population and how those issues affect people of all ages. A number of current controversies associated with our changing population structure will be discussed in class.

**SOWK 5330 Introduction to Animal Assisted Therapy**
Course provides an overview of the interdisciplinary field of animal-assisted therapy and the human-animal bond. Course will include observations of AAT visits to human service settings and web enhanced classes.

**SOWK 5336 Social Aspects of Death and Dying**
Gerontology and social work seek to apply knowledge from the social sciences, medicine, and the humanities with the skills and values of the helping professions. The multidisciplinary study of death (thanatology) itself comes out of studying these different disciplines. There are many social, psychological, philosophical, and religious theories concerning the passage of death – for both ourselves and those around us. We will study many diverse contributions in the social aspects of death and dying.

**SOWK 5337 Adult Development and Aging**
This course emphasizes the life course perspective as it looks at adult development and aging within the context of the social environment. Aspects of “successful aging” that will be examined cover growth and development from emerging adulthood to old age, and the impact that culture, gender, ethnicity, and individual differences have on these processes. Human development and
aging is examined during early adulthood, middle adulthood, and late adulthood. We will study aspects of development that are common to persons at all ages across the life course, individual differences in development, and differences that characterize the separate age cohorts.

**SOWK 7301 Foundations of Social Work Practice I**
Pre- or co-requisite: SOWK 7330. Study of social work profession and roles, values, and ethics of the profession; the generalist perspective; ecosystems perspective; strengths focus; empowerment practice; and the skills of engagement, assessment, and planning.

**SOWK 7302 Foundations of Social Work Practice II**
Prerequisite: SOWK 7301. Continuation of SOWK 7301. Study of strategies and techniques of intervention with individuals, families, groups, organizations, and communities; practice evaluation; and termination.

**SOWK 7316 Advanced Standing Seminar**
Prerequisite: advanced standing admission. Corequisite: SOWK 7603 and pre or corequisite SOWK 7370, 7391. Course is integrated with advanced standing internship to foster in-depth development of assessment, planning, intervention, and evaluation skills with a variety of client systems.

**SOWK 7320 Health and Biology of Aging**
Prerequisite: graduate standing. Understanding the consequences of aging and the extension of life expectancy requires the concurrent understanding of the interrelationship of biology and behavior. Research on “normal” aging over the life span offers the potential of understanding the changes that occur with age so that we can use this understanding to anticipate and cope with those physiological and behavioral functions altered by aging in ourselves and as caregivers. The course will examine physiological and epidemiological studies of disease and aging as well as the alteration in sensory perception, muscle function, etc. Finally, the issues of interventions, realistic expectations, and ethics will also be examined.

**SOWK 7321 Aging and Social Policy**
Prerequisite: graduate standing. This course offers an overview of aging and social policy issues, especially at the state and federal levels of government. Non-governmental agencies and organizations are also included. The aging network, healthcare including Medicare and Medicaid, as well as Social Security and retirement financing are highlighted. The course begins with a historical perspective on how we have gotten to our present health care policies. It then describes the aging network as well as the programs and services for the older adult that comprise this network.

**SOWK 7322 Assessment and Care Management of the Older Adult**
Prerequisite: graduate standing. Assessment and Care Management with the Older Adult will offer students a comprehensive review of the emerging professional practice of Geriatric Care Management (GCM). Throughout this course students will review a variety of geriatric assessments as well as study case management tools such as engaging, assessing, planning,
intervening, evaluating and terminating client cases. Critical thinking as an ethical professional will be emphasized as well as beginning interviewing skills.

**SOWK 7323 Social and Emotional Implications of Illness and Disabilities**
Prerequisite: graduate standing. Health care has become increasingly complex in the early 21st century. Those with a variety of developmental as well as acquired impairments and disabilities challenge the ability of society to mainstream a large minority of our citizens. An aging population with more chronic rather than acute health care needs is also a central concern. Finally, in the age of AIDS and other life threatening diseases, professional expertise in the psychological and social implications of illness and disability is a necessary skill. Professionals also have an increased responsibility to better understand the ethical as well as the bio-psycho-social-spiritual aspects of illness and disability in the individual, the family and the wider community.

**SOWK 7330 Human Behavior in the Social Environment I**
Prerequisite: program admission. This course covers human behavior theories supporting social work practice with individuals, families, groups, organizations, and communities. The ecological perspective and its impact on human development and non-mainstream groups will be addressed.

**SOWK 7331 Foundations of Social Work Practice III**
Prerequisite: SOWK 7330. This course explores the application of social work skills to practice within communities and organizations. Students will assess a target community, write grant proposals, and learn the practice of interactive supervision.

**SOWK 7350 Social Welfare Policies and Services**
Prerequisite: program admission. Study of the history and current structure of social welfare policy, the impact of discrimination, poverty and oppression on populations-at-risk, the response of society to social problems, and the skill of policy analysis.

**SOWK 7370 Social Work Research Methods**
Prerequisite: program admission or special permission from instructor. The study of social work research methodology, critical evaluation of published research, the values and ethics of research practice.

**SOWK 7390 Diversity and Oppression**
Prerequisite: program admission. Ethnic, racial, gender issues as related to social policy, human behavior and the social environment, practice issues; developmental, socioeconomic factors influencing gender roles; historical considerations and cultural and social context for social work practice among oppressed persons, people of color.

**SOWK 7391 Assessment and Differential Diagnosis**
Prerequisite: SOWK 7330. Psychopathology in children, adults; uses individual life cycle as framework for biological, social forces that prevent, limit individual social, psychological adaptation to environment during maturation process; emphasis on influence of gender and race
on development of mental disorders, individual adaptation to social environment; use of Diagnostic and Statistical Manual, DSM-IIIR as diagnostic reporting tool.

**SOWK 7394 Social Work Practice in Schools**
This course is an elective course designed to prepare students to be informed, resourceful, and proactive in providing services in the complex and dynamic context of the schools. The purpose of this course is to provide the social work student with knowledge of theories, concepts, and research about social work practice in schools. This course encourages students to engage in critical thinking which requires the synthesis and communication of relevant information about school social work theory and practice.

**SOWK 8191 Guided Study**
Prerequisites: consent of instructor, advisor, program director (Available, with a two-hour social work elective, to students from other graduate programs who wish to take social work electives but require three credit hours for their own program.). Directed individual study arranged by student.

**SOWK 8204 Crisis Problem Solving**
Prerequisite: completion of the foundation year graduate program. Theoretical concepts, treatment strategies for crisis situations; focus on planned brief treatment of individuals or families in stressful situations using cognitive or problem-solving approaches.

**SOWK 8205 Group Treatment**
Prerequisite: graduate standing. Group leadership to provide therapeutic intervention to members; leading groups with different needs, such as mental illness, antisocial behavior, addictions, neurosis, behavior changes.

**SOWK 7392 Special Topics in Clinical Social Work**
This course is focused on evidence-based practice models for clinical social work practice. This course presents current and contemporary mental and behavioral health treatment models and is highly application oriented. The overall goal of the course is to help students develop beginning level knowledge and skills in the treatment and prevention of psychosocial dysfunction, disability, or impairment, including emotional and mental disorders.

**SOWK 7403 Social Work Internship I**
Pre-requisites or co-requisites: SOWK 7301, 7330, 7350, 7390. (SOWK 7403 and 7404 must be completed consecutively, in the same agency setting). Supervised direct service activities; practical experience in applying foundation theory, skills; developing integrated social work practice skills with individuals, families, groups, communities; focus on developing professional relationships, initial intervention stages with client systems; requires 240 clock hours of placement. Graded credit/no credit.

**SOWK 7404 Social Work Internship II**
Prerequisite: SOWK 7403. Pre-requisites or co-requisites: SOWK 7302, 7331, 7370, 7391.
(SOWK 7403 and 7404 must be completed consecutively, in the same agency setting). Continuation of SOWK 7403; requires 240 clock hours of placement. Graded credit/no credit.

**SOWK 7603 Advanced Standing Social Work Internship**
Prerequisites: Advanced Standing admission. Pre or co-requirements: SOWK 7370, 7391, 7316 and 7316 co-requirements. Supervised direct service activities; practical experience in applying foundation theory, skills; developing integrated work practice skills with individuals, families, groups, communities, organizations; focus on professional relationships, initial intervention stages with clients systems; requires 240 clock hours of placement. Six credit hours.

**SOWK 7803 Social Work Block Internship**
Co-requisites: SOWK 7301, 7302, 7330, 7331, 7350, 7370, 7390, 7391. 480 hours of supervised social work practice in applying foundation year theory, skills and social work values and ethics. Students practice engagement, interviewing, assessment planning, basic intervention, evaluation and termination skills at all systems levels.

**SOWK 8159 Evaluation Research II**
Prerequisite: SOWK 8259. Evaluation research design, data collection, data analysis, and reporting; the political contexts of needs assessment and program evaluation.

**SOWK 8206 Psychodrama**
Prerequisite: completion of the foundation year graduate program. Technique originated by J.L. Moreno; personality makeup, interpersonal relationships, emotional problems, decisions, conflicts are explored by dramatic enactment in a positive, supportive setting.

**SOWK 8207 Child Behavior and Treatment**
Prerequisite: completion of the foundation year graduate program. Psychosexual, social, cognitive, physical development of children; major diagnostic categories; treatment approaches reviewed, evaluated for appropriateness according to individual child, family environment needs.

**SOWK 8208 Child Abuse and Treatment**
Prerequisite: completion of the foundation year graduate program. Variables in child maltreatment; physical, psychological, emotional, social implications; social work methodologies; role of multi-disciplinary teams.

**SOWK 8209 Community Social Work**
Prerequisite: graduate standing. Social context, practice parameters of community social work; emphasis on organizational analysis, problem identification, community organization strategies for social change and institution building, leadership development, community research.

**SOWK 8211 Social Work Practice with Older Adults**
Prerequisite: graduate standing. Biopsychosocial/cultural approach to aging; includes demographic, attitudinal aspects; impact of race, gender, class, ethnicity; health, mental health issues; assessment factors; long-term care continuum; roles of families; special policy issues;
social work approaches.

**SOWK 8213 Supervision**  
Prerequisite: graduate standing. Purpose, functions, processes; emphasis on beginning-level interactional skills.

**SOWK 8215 Domestic Violence**  
Prerequisite: graduate standing. Current theories, research, social work practice; violence against women, children, elderly.

**SOWK 8218 Grief, Loss, and Social Work Practice**  
Prerequisite: graduate standing. Basic assessment and intervention skills for practice with client systems experiencing grief and loss.

**SOWK 8230 Evidence-based Social Work Practice in Adult Mental Health**  
Prerequisite: graduate standing. Evidence-based Social Work Practice in Adult Mental Health builds on Assessment & Differential Diagnosis and provides knowledge of evidence-based practice approaches for adult clients who have a DSM-IV-TR diagnostic condition. This course will cover those psychiatric disorders commonly encountered in social work practice: anxiety, personality, mood, substance use, and psychotic disorders. Emphasis is placed on cultural and social aspects of mental health and issues important to populations at risk. An ecological and bio-psychosocial perspective is utilized to develop assessment and treatment strategies that are evidence-based and consistent with cultural and other issues related to diversity. The course will explore mental health care as it is delivered in a variety of settings: outpatient versus inpatient, residential and day treatment, acute versus long term, and private practice versus the community mental health setting. The course will enlighten the student to the range of issues, ethical and otherwise, that impact this population: legal, economic, relational, medical, and educational.

**SOWK 8231 Addictions Treatment**  
Prerequisite: graduate standing. Dynamics of addiction, treatment; biological, social, societal aspects of addiction; implications for treating special populations.

**SOWK 8234 Personality Theory**  
Prerequisite: graduate standing. Several frames of reference on personality theory; includes historical antecedents, major concepts, applicability to social work practice, limitations of various theories.

**SOWK 8235 Spirituality in Social Work**  
Prerequisite: graduate standing. This course provides the general framework for dealing with spiritually sensitive social work situations. It provides the students with the content for dealing with the matters of the human spirit.

**SOWK 8236 Human Sexuality and Social Work Practice**  
Prerequisite: completion of the foundation year graduate program. This course provides students
with a multidisciplinary approach to human sexuality. Students will have the opportunity to explore views experiences, values, and beliefs and how these impact on the clients which they serve along with the societal and cultural issues that may impact upon clients of social work and other mental health professionals.

**SOWK 8238 Women & Family Issues in Social Work**
This course will examine women’s and family issues in social welfare with particular attention to the social service delivery system, significant historical and contemporary federal/state policy issues, and the social work profession. Several special populations of women will be considered, including poor women, survivors of violence, and older women. Specific topics to be addressed in this course are work/family issues, welfare and poverty, violence against women, and care giving.

**SOWK 8251 Juvenile Delinquency**
Prerequisite: graduate standing. Forms of unlawful behavior during adolescence, early adulthood; major theories of delinquent behavior, including control, anomie, subcultural, interactionalist, labeling, classical; major theories of justice, including classical, just desserts, deterrence, rehabilitation models.

**SOWK 8253 Law and Social Work**
Prerequisite: graduate standing. Areas of law that shape, regulate the social work profession; contributions, significance of legal issues to client services, the profession; legal policies that may control, restrict clients’ lives.

**SOWK 8259 Evaluation Research I**
Prerequisite: SOWK 7370. Management and community practice applied to the methods of social work practice evaluation through needs assessment and program evaluation. Builds on foundations provided in SOWK 7370, extending into macro-practice research at the organizational and community level. Emphasizes empowerment evaluation as a mechanism to foster improvement and self-determination. A theories-of-change approach is used to guide evaluation.

**SOWK 8271 Research Project**
Prerequisites: SOWK 7370 and 8371 or consent of instructor. Steps in carrying out a research project; all phases of research methodology.

**SOWK 8242 Global Perspective in Social Work**
Prerequisite: Graduate Standing Building a first-year domestic social policy courses, the purpose of this course is to expose students to a variety of global social issues related to social welfare and social development. Using film as the medium students will engage in critical thinking and analysis of social welfare issues, and explore how Political, economical, cultural, religious, historical and environmental factors impact social welfare policies and the delivery of human services in different regions of the world. This course is useful for those who have had previous international experience and/or those who are interested in international social work and are looking for a forum in which such experiences and interests can be processed in the context of
existing theoretical frameworks and models of social welfare service delivery.

**SOWK 8240 Psychodynamic Psychotherapy**
Psychodynamic Psychotherapy provides an overview of Freudian drive/structural theory and the central concepts of early psychoanalytic thinking. The basic principles of psychodynamic psychotherapy will then be covered with a review of how certain concepts proposed by Freud have been adhered to, changed, modified, or abandoned altogether. The theoretical basis for dynamic therapy will then be covered along with a brief overview of current schools of psychodynamic theory. An evidence-based ego-psychoanalytic/object relations approach to assessment and treatment of neurotic, borderline, and psychotic disorders is then be presented. The ego psychological component will address the assessment of person-in-situation factors; issues related to adaptation; and ego functions, including defense mechanisms that span the range of mature-higher/lower level-psychotic. Particular emphasis will be placed on the object relations component of this theory, focusing on the developmental trajectory of object relations and specific fixation points that result in character pathology, organized at a psychotic, borderline or neurotic level.

**SOWK 8242 Global Perspective in Social Work**
Prerequisite: graduate standing. Building on first-year domestic social policy courses, the purpose of this course is to expose students to a variety of global social issues related to social welfare and social development. Using film as the medium students will engage in critical thinking and analysis of social welfare issues, and explore how political, economical, cultural, religious, historical and environmental factors impact social welfare policies and the delivery of human services in different regions of the world. This course is useful for those who have had previous international experience and/or those who are interested in international social work and are looking for a forum in which such experiences and interests can be processed in the context of existing theoretical frameworks and models of social welfare service delivery.

**SOWK 8292 Guided Study**
Prerequisites: consent of instructor, approval of course outline by school’s Curriculum Committee. Directed individual study arranged by student.

**SOWK 8301 Advanced Directed Practice I**
Prerequisite: concentration year standing. Developing biopsychosocial framework for assessment, intervention; focus on careful assessment, diagnosis prior to clinical interventions.

**SOWK 8302 Advanced Directed Practice II**
Prerequisite: SOWK 8301 or MFT-GC admission. This course provides knowledge and skills about social work practice with couples and families. It studies the major schools of family theory, methods for practice with families, and systemic links between family, culture, and society.

**SOWK 8303 Couples Treatment**
Prerequisite: completion of the Foundation Year of the MSW or similar MA program and admission to the MFT certificate program. Couples Treatment is a course designed to apply principles of family therapy theory to work with couples. Students are challenged to consider
differences and similarities between individual, family, and couples treatment. Cognitive Behavioral Couples Therapy, Object Relations Couples Therapy, Brief Strategic Couples Therapy, and Narrative Couples Therapy will provide the theoretical foundation for examining issues couples face. Issues related to same-sex couples, domestic violence, infidelity, and addiction will be examined as part of the course.

**SOWK 8305 Management and Community Practice I**
Prerequisite: concentration year standing. Management, administration in social work, human services; includes decision making, leadership styles; basic tasks, roles, skills of managers; management processes such as financial, human resource management.

**SOWK 8306 Management and Community Practice II**
Prerequisite: SOWK 8305. Continuation of SOWK 8305; use of competing values framework (a meta-theoretical model) to integrate management skills of boundary-spanning, human relations, coordinating, directing.

**SOWK 8308 Ethical Issues in Couple and Family Therapy**
Prerequisite: admission to the MSW program or the MFT-GC program. Designed to provide knowledge necessary for understanding legal and ethical issues that confront practice. The legal responsibilities of the family therapist are examined with emphasis on personal and professional development. Ethical issues related to diversity are considered within the context of couple and family therapy.

**SOWK 8309 Intergenerational Family Therapy**
Prerequisite: admission to the MSW program or the MFT-GC program. Provides students with knowledge on family functioning across generations based on Murray Bowen’s theories. Application of theories through the use of family assessment and intervention techniques.

**SOWK 8310 Sociology of the Family**
Prerequisite: admission to the MSW program or the MFT-GC program. Course will focus on the family as an institution responsive to social and economic change. It will provide a knowledge base in institutional and historical aspects of the family. The course is required for the Marriage and Family Certificate.

**SOWK 8311 Family Life Cycle**
Prerequisite: graduate standing. Focus on the theoretical underpinnings of the many and varied life cycles families experience. Particular emphasis will be placed on cultural influences and populations at risk.

**SOWK 8312 Play Therapy**
Prerequisite: concentration year standing, MFT-GC, program or instructor permission. This course provides introductory instruction in history, theories, and applications of play therapy consistent with Association of Play Therapy (APT) requirements. Students are expected to have successfully completed course work in child development (e.g., Advanced Direct Practices I) Special issues
affecting oppressed children will be addressed, including: parent-child problems, divorce, abuse/neglect /abandonment, etc. Diversity issues will also be explored as key components of competent play therapy practice. Students will be challenged to apply what they are learning about work with children in mock clinical sessions. This three-hour graduate level semester course, according to APA, is consistent with APT requirements for instruction, and provides 67.5 Continuing Education (CE) hours toward the mandatory 150 required for RPT certification.

**SOWK 8320 Family Mediation**
Focuses on social work practice in family mediation. It will equip students with the skills and information needed to meet requirements of the Arkansas Dispute Resolution Commission for their family mediation roster.

**SOWK 8340 Aging and Social Policy II**
Health needs of the elderly and health care systems that address them; mechanisms for health care delivery and for financing institutional community-based care; effects for elderly of reform proposals.

**SOWK 8346 Family in Late Life**
Prerequisite: graduate standing. Family life of the elderly; includes late-life marital relationships; widowhood, living alone; relations with children, grandchildren, siblings, other kin; alternative, innovative lifestyles; neglect, abuse of the elderly; demographic, structural changes in family, society that affect these matters; core concept is the family as a natural support system for the elderly; its potential and limitations in a context of community support networks.

**SOWK 8371 Statistics for Social Work**
Prerequisite: SOWK 7370 or special permission from Instructor. Statistics, their use in analyzing data; probability, inferential, decision-making, basic statistics; includes central tendencies, variability, data distributions, bivariate, multivariate procedures; critiquing articles in social work journals.

**SOWK 8390 Advanced Direct Practice III**
Prerequisite: SOWK 8301. Corequisite: SOWK 8302. This course provides knowledge about social work practice with groups with an emphasis on the application of group theory to many forms of groups in a variety of settings. This course will include content on supervision of workers learning group practice skills.

**SOWK 8503 Advanced Direct Practice Internship I**
Prerequisite: concentration year standing. Pre or corequisite: SOWK 8301. (SOWK 8503 and 8504 must be completed consecutively, in the same agency setting). Hands-on experience with individuals, groups, families; emphasis on applying concepts from SOWK 8301; requires 360 clock hours of internship placement. Graded credit/no credit.

**SOWK 8504 Advanced Direct Practice Internship II**
Prerequisites: Social Work 8301, 8503. Pre or corequisite: SOWK 8302. (Social Work 8503 and
8504 must be completed consecutively, in the same agency setting). Continuation of Social Work 8503; focus on integrating knowledge in preparation for professional practice; requires 360 clock hours of placement. Graded credit/no credit.

**SOWK 8507 Internship I Management & Community Practice**
Prerequisite: concentration year standing. Corequisite: SOWK 8305. (SOWK 8507 and 8508 must be completed consecutively, in the same agency setting). Experience working in a social service agency in an administrative capacity; requires 360 clock hours of placement. Graded credit/no credit.

**SOWK 8508 Internship II Management & Community Practice**
Prerequisites: SOWK 8305, 8507. Corequisite: SOWK 8306, 8159. (SOWK 8507 and 8508 must be completed consecutively and in the same agency setting). Continuation of SOWK 8507; focus on integrating knowledge, assuming responsibility for administrative functions, including planning, evaluation. Graded credit/no credit.
The mission of the Donaghey College of Engineering and Information Technology is to educate the next generation of technical professionals in the skills and knowledge base necessary to create and manage the technology-based enterprises that will provide future economic growth and an improved standard of living for the state of Arkansas and its citizens. The college’s expectation is for every Arkansas child to have the opportunity to participate in the new knowledge-based digital economy of the 21st century. This mission includes technological education at all levels, from high school through advanced graduate degrees, as well as contributions through scholarly research and community involvement.

In meeting this mission, the college offers a wide range of graduate degrees. Graduate students have the option to pursue a Ph.D. in Integrated Computing or Engineering Science and Systems. The College participates in the M.S.-Ph.D. program in Bioinformatics (See program section for more information) offered jointly with the University of Arkansas for Medical Sciences. Additional graduate programs in the college include an M.S. degree in Computer Science, an M.S. degree in Construction Management, a graduate certificate in Geospatial Technology, a graduate certificate program and an M.S. degree in Information Quality as well as a graduate certificate program in Technology Innovation. It also offers a graduate certificate program and an M.S. degree in Systems Engineering. Extensive outreach to the general undergraduate population happens through our Computer Literacy classes and the acclaimed Information Technology (IT) minor, designed to provide the non-technology majors with the IT tools necessary to command leadership positions in today’s IT-enabled enterprises.

Outreach to the community includes the IT certificate program for in-service learning and extensive partnering with high schools across the state for in-school activities and summer programs. Specific emphasis is on partnerships with the local and regional industries ranging from direct company input into our programs to in-service courses to directed research projects.

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<thead>
<tr>
<th>Program</th>
<th>Certificate or Degree Program</th>
<th>Department</th>
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<tbody>
<tr>
<td>Bioinformatics</td>
<td>Master’s (M.S.)</td>
<td>Multi-departmental joint degree</td>
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<td>Doctorate (Ph.D.)</td>
<td>Multi-departmental joint degree</td>
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<td>Computer Science</td>
<td>Master’s (M.S.)</td>
<td>Computer Science</td>
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<tr>
<td>Construction Management</td>
<td>Master’s (M.S.)</td>
<td>Construction Management and Civil and Construction Engineering</td>
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<td>Data Science</td>
<td>Graduate Certificate</td>
<td>Information Science</td>
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<tr>
<td>Engineering Science &amp; Systems</td>
<td>Doctorate (Ph.D.)</td>
<td>Systems Engineering</td>
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<td>Geospatial Technology</td>
<td>Graduate Certificate</td>
<td>Earth Sciences</td>
</tr>
<tr>
<td>Information Quality</td>
<td>Graduate Certificate</td>
<td>Information Science</td>
</tr>
<tr>
<td>Information Quality</td>
<td>Master's (M.S.)</td>
<td>Information Science</td>
</tr>
<tr>
<td>Information Science</td>
<td>Master's (M.S.)</td>
<td>Information Science</td>
</tr>
<tr>
<td>Integrated Computing</td>
<td>Doctorate (Ph.D.)</td>
<td>Computer Science</td>
</tr>
<tr>
<td>Systems Engineering</td>
<td>Graduate Certificate</td>
<td>Systems Engineering</td>
</tr>
<tr>
<td>Systems Engineering</td>
<td>Master's (M.S.)</td>
<td>Systems Engineering</td>
</tr>
<tr>
<td>Technology Innovation</td>
<td>Graduate Certificate</td>
<td>Information Science</td>
</tr>
</tbody>
</table>
The University of Arkansas at Little Rock (UALR) and the University of Arkansas for Medical Sciences (UAMS) jointly offer master’s and doctorate degrees in bioinformatics. Combining the academic, clinical, and research resources of UAMS with the computational, scientific, academic, and research capabilities of UALR, this program prepares students to function in an interdisciplinary research environment. For more information, visit the Bioinformatics graduate program’s [website](#).

### Admission Requirements for both M.S. and Ph.D.

Applicants are expected to have a minimum of a four-year undergraduate degree (BS or BA) in the life sciences, statistics, or information/computer sciences. Students with an undergraduate degree in another field may be considered for admission if they have either relevant work experience in one of these three areas or complete sufficient remedial course work as defined below. Students who have not satisfactorily completed the following courses or their equivalent as part of their academic studies will be required to complete them on a remedial basis:

- **Biology/Chemistry/Genetics**
  A junior-level, life science course equivalent to UALR’s BIOL 3300 Genetics.

- **Statistics**
  A junior-level, calculus-based course equivalent to UALR’s STAT 3352 Applied Statistics I.

- **Programming**
  Some programming experience; a sophomore-level introduction to Java programming equivalent to UALR’s IFSC 2300 Object-Oriented Technology course is preferred.

- **Databases**
  A junior-level course equivalent to UALR’s IFSC 3320 Database Concepts is recommended.

Students will have to meet the minimum admission requirement of a GPA of 3.0 or a GPA of 3.3 or greater on their last 60 credit hours as an undergraduate. GRE scores, a letter of intent, a résumé, and letters of reference are considered in the admission process; TOEFL scores are
required of international students who have not matriculated from a university in a country where
the primary language is English. (Please see the UALR Graduate School’s requirement for English profiency exams.)

Master of Science in Bioinformatics

Program Requirements
The MS program is built around four cores. Students must complete 38 credit hours consisting of the following:

Core Courses (four classes, 15 credits)
- BINF 5445 Bioinformatics Theory and Applications (UALR-fall)
- BIOL 5415 Biometry (UALR-fall) or BIOM 5013 Biometrical Analysis I (UAMS)
- BIOL 5417 Molecular Biology (UALR-spring)
- One of the following: CPSC 7375 Machine Learning (spring), CPSC 7373 Artificial Intelligence (fall), or CPSC 7385 Analysis of Algorithms (fall)

Elective (three to four classes, minimum of 12 credits)
Students will choose their courses in consultation with their faculty advisor. Electives are meant to further enhance a student’s ability to engage in research in one of four key areas: Drug Design, Integrated Bioinformatics & Genomics, Computational Biology, or Biomedical Informatics.

Other Requirements (six credits)
Four credits of either
- BINF 7X56 Capstone Project
- BINF 7X55 Thesis

Two credits of BINF 7193 Seminar (two semesters)

Lab Rotations of Research Experience (two credits)
Two credits of BINF Lab Rotation (two semesters) to locate a research mentor. During the Lab Rotation, students are assigned to one or more faculty to gain experience in that faculty’s research area.
- Students will take a minimum of two semesters of Lab Rotations to identify their research mentor. Once students have found their mentor, they can complete their remaining lab research requirements with their mentor.
- Lab rotations are graded. Students must produce a lab report (minimum four pages) by the end of the semester as part of their grade.
Master’s Advising

Master’s students are advised by the Bioinformatics Program Director.

M.S. Graduation Requirements

- Successful completion of an approved program of study with a minimum GPA of 3.0 with no more than one grade below a B and successful completion of the writing requirement.
- Successful defense of a Bioinformatics capstone project or thesis. The Review Committee will consist of a lead faculty research mentor and at least two other faculty members with Bioinformatics graduate faculty status.

Doctor of Philosophy in Bioinformatics

Program Requirements

The Ph.D. requires completion of the MS degree in bioinformatics or closely related field. Students pursuing the Ph.D. need to demonstrate good research potential in their culminating master’s project or thesis. Enrolling in a minimum of two credits of the BINF 7193 Bioinformatics Seminar and taking a minimum of 32 credit hours of research complete the Ph.D. program, culminating in the successful defense of the student’s dissertation research, completes the Ph.D. program. Students completing the M.S. degree in bioinformatics or its equivalent at another institution may be admitted directly in the Ph.D. program, but may need to complete additional course work to cover all four cores of the UALR/UAMS M.S. degree program.

Within the first six months of entering the Ph.D. program, students must have an approved advisory committee and defend their dissertation proposals. The dissertation proposal should be written according to standard grant format as would be used for submitting a proposal to NIH or NSF.

Important Program Information

Transfer of Credit and Advanced Placement

Transferability of credit is determined by the program director, based upon the applicability of the courses to the student’s educational goals and research project. Transfer of credit may not be granted when courses have been used to meet other degree requirements. Additionally, students with relevant graduate degrees in related fields may petition the program director for an Advanced Placement which reduces the total credits required for a master’s degree to 29 credits.

Graduate Assistantships
Graduate assistantships that support research opportunities are available to qualified full-time students on a highly competitive basis. Tuition is paid, and a stipend is provided for living expenses. Students must pay registration fees, buy textbooks, and purchase any necessary support materials. For more information about graduate assistantships, the application process, and other financial assistance opportunities, visit the website.

A student supported by a graduate assistantship may not take less than nine credit hours during the Fall and Spring semesters and is prohibited from any other employment.

Entrance Exams

In the week prior to the start of classes, incoming students may be asked to undergo a series of entrance exams or placement interviews in which the student must demonstrate proficiency in the core areas. The student’s first semester of study will be based on the results of these exams/interviews and his/her interests. A student may be required to take additional undergraduate courses, which will not count toward his/her degree program, to remedy any deficiencies. Courses numbered at the 4000-level or below do not count for graduation credit and may not be covered under the assistantship tuition waiver.

Writing Requirement

An English Writing Proficiency Exam (WPE) will be offered early each spring term. This exam will assess the student’s ability to communicate in a written format. Each student must pass this exam to fulfill graduation requirements. A student who does not pass the WPE is required to take the English Writing Proficiency Laboratory (EWPL) which is offered each Spring term. The student must take the EWPL each Spring term until he/she passes.

International Student Requirements

International students whose native language is not English must take the English proficiency exam and have an official score that meets the minimum standards established by the UALR Graduate School. (Please see the UALR Graduate School’s website for information on approved exams and minimum required score.) Only students who have studied full-time for two or more years at a college or university where English is the language of instruction located in a country where English is the native language are exempt from this English proficiency exam.

Exceptions to this policy must be approved by the UALR Graduate School.

Dissertation Defense

Students will orally defend their research before their Doctoral Advisory Committee. Printed copies of the penultimate draft of the dissertation must be delivered to the Advisory Committee
members at least two weeks prior to the defense. The defense will be open to the public and must be announced at least two weeks in advance by the program director. Following the open presentation session (including the typical question-and-answer period) will be a closed examination of the candidate by the Doctoral Advisory Committee. The examination can be wide-ranging but will usually utilize the student’s research as a starting point. At the completion of the examination, the student will be temporarily excused and the Doctoral Advisor and Advisory Committee will vote to either pass or fail the student.

Doctoral Advisory Committee

The student’s Doctoral Advisory Committee will be composed of a minimum of five members, including the student’s doctoral advisor who will serve as the committee chair. Four of the committee members, including the chair, must hold bioinformatics graduate faculty status. The fifth member must be an external member who is not affiliated with the program, UALR, or UAMS. The Bioinformatics graduate coordinator in conjunction with the Bioinformatics Steering Committee, must approve the committee constituency.

The dissertation subject is selected by the student and Doctoral Advisory Committee at least two years prior to the oral defense of the research. It must be a scholarly contribution to a major field of bioinformatics and involve all four core courses of the program. The written dissertation format must follow the UALR Graduate School’s Dissertation and Thesis Guide found on the Graduate School website. Changes may not be made to the student’s Doctoral Advisory Committee within six months of the dissertation defense. In event of extenuating circumstances, an appeal may be made to the Bioinformatics program director to change this requirement.

Graduation Requirements

- Successful completion of an approved program of study (including completion of the Master of Science in Bioinformatics or a closely related degree) with a minimum GPA of 3.0 with no more than one grade below a B;
- Successful completion of the dissertation proposal defense; proposal should be written using a grant proposal format; the dissertation proposal defense will also serve as the candidacy examination;
- Successful completion of the dissertation and oral defense; and
- Successful completion of the writing requirement.

Courses in Bioinformatics

**BINF 5445 Bioinformatics Theory and Applications**
Prerequisites: course director’s permission plus the following: BIOL 3300 Genetics or equivalent, IFSC 3320 Database Concepts or equivalent, IFSC 2300 Object-oriented Technology (Java Programming) or experience with another programming language such as “C” or “C++”, STAT
3352 Applied Statistics I or equivalent, MATH 1304 Calculus I or equivalent recommended, BINF 2345 Introduction to Bioinformatics recommended, some exposure to molecular biology recommended. An overview of concepts central to the study and application of bioinformatics drawing upon the fields of biostatistics, computer and information science, and the life sciences. Three hours of lecture plus two hours of laboratory per week. Four credit hours.

**BINF 7145, 7245 Introduction to Bioinformatics Research**
Prerequisite: permission of instructor. Rotations through the bioinformatics, biostatistics, information science, and/or life sciences research laboratories of faculty participating in the bioinformatics graduate program.

**BINF 7193 Bioinformatics Seminar**
Prerequisites: bioinformatics graduate student status or instructor’s consent. A survey of scientific and technical topics relevant to bioinformatics. The seminar has two components: attending seminars hosted primarily by BINF Ph.D. students and participating in a presentation workshop where students present seminars on their research interests. A passing grade is required in both components for a passing grade in the course. One credit hour.

**BINF 7199, 7299, 7399, 7499 Special Topics in Bioinformatics**
Prerequisites: instructor’s consent. Detailed study in bioinformatics and related areas; may be lecture or lecture and laboratory, depending on specific topics. Variable credit of one to four hours. Offered on demand.

**BINF 7155-7455 Graduate Thesis**
Prerequisite: Consent of thesis advisor. Scholarly investigation of a selected problem in bioinformatics culminating in a written, orally defended thesis. Maximum of four hours may be applied to M.S. Variable credit of one to four hours.

**BINF 7156-7456 Bioinformatics Capstone Project**
Prerequisites: course director’s permission. This course provides a structured context in which the student completes an individual capstone project for the master’s degree in bioinformatics. The project draws upon the core content of the graduate program and is done under the direction of a project mentor who is a member of the graduate faculty of the UALR/UAMS Joint Graduate Program in Bioinformatics. Maximum of four hours may be applied to M.S. Variable credit of one to four hours.

**BINF 7295 Practical Topics in Science Management**
A survey of practical topics relevant to practicing scientists and engineers such as ethics, project management, and grant writing. While an emphasis is placed on bioinformatics, topics will be of interest to all participating in science and engineering projects. Two credit hours. Cross-listed with ASCI 7295.
BINF 9100-9900 Doctoral Research/Dissertation
Prerequisite: Consent of advisor. Bioinformatics doctoral research leading to Ph.D. dissertation.
Master of Science in Computer Science

The Master of Science in Computer Science program at UALR reflects current trends in the computer science discipline and provides students with a solid theoretical and practical foundation for careers in computer science and/or advanced graduate studies.

The curriculum consists of two parts: 1) core and 2) specialization course work. Core curriculum refers to required courses that provide students with fundamental knowledge and skills. Building on the core foundation, the specialization course work allows students the opportunity to select electives to acquire more in-depth knowledge and skills in the students’ specific areas of interest.

To satisfy the requirements for the master’s degree, in addition to the course work, students must complete one of the following program options: thesis, project, or comprehensive examination.

The program is accessible to day and evening students and lends itself to full- and part-time study.

Additional information is available at Computer Science website.

Admission Requirements

- Baccalaureate degree in computer science, engineering, mathematics, or a related discipline from an accredited institution
- Cumulative Grade Point Average (GPA) of at least 3.0 (4.0 scale). However, in some cases, if the GRE score is above the minimum desired score, a GPA lower than 3.0 can be considered for full/conditional admission.
- Where applicable, Test of English as a Foreign Language (TOEFL) score of 80 or above or equivalent IELTS score is recommended.
- On the Graduate Record Examination (GRE) general test, the desired scores are a quantitative reasoning score of 155 or above, a verbal reasoning score of 145 or above, and analytical writing score 3.0 or above.
- Completion of deficiency course work, if conditional admission is granted.

For more information, visit the Computer Science website.
Deficiency Course Work

All students seeking admission to the program must have completed (with a grade of B or greater in each course) undergraduate course work equivalent to the following:

- CPSC 2380 Data Structures and Algorithms
- CPSC 2382 Introduction to Computer Systems and Assembly Language
- CPSC 3375 Database Concepts I
- **or** CPSC 4375 Software Engineering
- CPSC 3380 Operating Systems Concepts
- CPSC 3383 Programming Languages
- CPSC 3482 Computer Organization I
- MATH 1451 Calculus I
- MATH 1452 Calculus II
- MATH 2310 Discrete Mathematics

Students who have not completed such course work must compensate for deficiencies by taking CPSC 5399. Courses taken to compensate for deficiencies are not credited towards the degree. Exception: students with a single deficiency course remaining may register for that class and graduate classes as long as no prerequisites are violated.

Waiver of deficiency courses is at the discretion of the Computer Science Graduate Committee.

Program Requirements

Core Course Work

All students must take the following 5 courses (15 credit hours):

- CPSC 7311 Software Engineering
- CPSC 7321 Operating Systems
- CPSC 7331 Computer Architecture
- CPSC 7341 Telecommunications and Networking
- CPSC 7385 Analysis of Algorithms

Specialization Course Work

Students must choose five specialization classes (three if the thesis option is selected) from the department’s graduate-level courses. Students are strongly encouraged to select courses with the guidance of their graduate advisors with the goal of in-depth exploration of a particular area of computer science. Students may take a maximum of two 5000-level courses as part of their specialization course work. Additionally, the total number of special topic/independent study classes cannot exceed two. Substitution of up to two graduate electives from other disciplines (in particular Applied Science, Systems Engineering, Information Science, and Mathematical Sciences) for specialization course work is at the discretion of the Computer Science Graduate Committee.
Coordinated.

Transfer of credit hours earned elsewhere

Maximum of six (6) graduate credit hours can be transferred into the graduate degree plan.

Program Options

All students must complete one of the following options:

- Comprehensive Graduate Exam: 30 credit hours of course work plus a written comprehensive examination covering the core curriculum. The examination is offered once per regular semester and can be taken only twice.
- Graduate Project: 33 credit hours, consisting of 30 hours of course work plus three credit hours of CPSC 7398 Graduate Project.
- Graduate Thesis: 30 credit hours, consisting of 24 hours of course work plus six credit hours of Thesis (CPSC 8100-8600).

Students choosing the project or thesis options must complete the core curriculum prior to enrolling in CPSC 7398 Graduate Project or CPSC 8100-8600 Thesis. Additionally, these students must form a Thesis/Project Committee must have at least two members, including the advisor, from the Computer Science Department and can have at most one member from other departments. Following the recommendation of the Thesis/Project Committee, the student must schedule an oral proposal presentation and a defense for the graduate project or thesis.

Performance Requirements

- Students receiving a C grade will be warned that their academic performance is unacceptable and their status will be reviewed by the Computer Science Graduate Committee, which will suggest corrective action.
- Upon receiving two Cs or either a D or an F, the student will be dismissed from the program.
- Courses with grades of B or greater may not be repeated.
- Core courses with grade of C do not satisfy the degree requirement and must be repeated. A minimum score of B is required for each of the core courses.
- Deviation from the degree plan requires the approval of the Computer Science Graduate Committee.
- Conditionally admitted students must earn a Grade Point Average (GPA) above 3.5 in the first 9 hours and may not receive a grade of incomplete (I).

Academic Advising

Each semester, academic advising is required for every student prior to course registration. A copy of the approved courses must be filed with the Graduate School.

Graduate Assistantships
A limited number of graduate assistantships are available. Contact the Computer Science graduate coordinator for information.

Graduation Requirements

- Cumulative GPA of at least 3.0 in an approved program of study and satisfying all requirements specified in Performance Requirements.
- Successful completion of one of the program options specified in Program Options.

Courses in Computer Science

**CPSC 5199-5499 Special Topics**
Prerequisites: graduate standing, consent of instructor. Various topics in applied computer science, selected from the areas of intelligent systems and computer systems design. On demand.

**CPSC 5360 Computer Security**
Prerequisites: CPSC 3370 or equivalent of the consent of the instructor. Increasing reliance on our computer based infrastructure elements along with the information driven nature of today’s business require a solid and in-depth understanding of security issues pertinent to these systems. The topics include threats, assumptions, assurance, confidentiality, integrity, availability, access control matrix and policies, security models, requirements imposed by policies, protection models, covert channels, formal methods for security, designing and evaluating systems, intrusion detection, auditing, and other contemporary issues. Three hour lecture per week. Three credit hours. Not open to students with credit for CPSC 4360.

**CPSC 5366 Interactive Computer Graphics and Animation**
Prerequisites: Graduate Standing. Knowledge of C, C++ or Java Programming. Approval from the instructor. This course introduces computer graphics and all details of the design of modern graphic architecture. The topics covered include two – and three – dimensional modeling and transformation, lighting and shading, animation techniques, and an introduction to OpenGL. Three hours lecture; three credit hours. Not open to students with CPSC 4366.

**CPSC 5370 Theory of Computation**
Prerequisites: CPSC 3383, MATH 2310. A study of the main areas of theoretical computer science and their hierarchical interconnections. Basic results relating to formal models of computation, with emphasis on grammars and languages, finite automata, Turing machines, and computational complexity. Three hours lecture per week. Three credit hours. Students with credit for 4370 may not take 5370.

**CPSC 5372 Object-oriented Programming**
Prerequisites: working knowledge of a procedural programming language and UNIX operating system, or consent of the instructor. Concepts of object-oriented analysis, design, and
implementation. Object-oriented programming in C++, Smalltalk, Java, and/or another current object-oriented programming language.

**CPSC 5373 Fundamentals of Software Engineering**
Prerequisite: Graduate Standing. This is a foundational course that covers fundamentals of modern software engineering. Topics included are: requirements definition, analysis, and modeling including use cases and use case paths, domain names, state transition diagrams; techniques to increase robustness and avoid disastrous defects; object oriented architecture and design patterns and specification in UML; performance impact of design choices; analysis of designs regarding maintainability and testability; security engineering; practical system test and glass – box testing fundamentals; verification of test coverage via decision tables and state transition tables. Three hours lecture per week. Three credit hours. Not open to students with credit for CPSC 4373.

**CPSC 5375 Fundamentals of Database Management**
Prerequisites: CPSC 3375 or equivalent. Advanced topics related to the design and efficient implementation of modern database management systems. Concurrency and transaction management, database security, query processing, query optimization, physical database storage, and indexing. Three hours lecture per week. Three credit hours. Students with credit for 4375 cannot take CPSC 5375 for additional credit.

**CPSC 5376 Applied Cryptography**
Prerequisites: CPSC 2380, MATH 2310, and STAT 3352 or equivalents. A survey and study of the major cryptographic techniques, algorithms, and implementations, with emphasis on applications to communications and network security. Intended as a practical introduction to the current state-of-the-art of cryptographic usage. Three hours lecture. Three credit hours.

**CPSC 5377 Advanced Game Programming**
Prerequisite: CPSC 2380, junior/senior or entry graduate level standing. This course is the third semester of programming and problem solving using the C++ language to develop video games. The course will cover implementation of numerous advanced programming techniques: resource management, graphical interfaces, physics, collision detection and resolution, non-player characters, and media integration. The examples and programmings assignments make extensive use of multiple external C++ libraries. The class will also cover select theoretical aspects of game programming and development. Students with credit for 4377 may not take 5377 for additional credit.

**CPSC 5381 Computer Architecture and Design**
Prerequisite: Graduate Standing. This course addresses the architecture and design of modern microprocessor computers. In it adheres to the principle of “no mysteries” and reveals all the details of the design of modern pipeline microprocessor system. The topics covered include formal description of computer architecture and design, instruction set architectures, processor design of modern computers, pipeline and instruction level parallelism, memory system design, and input and output systems. Not open to students with credit for CPSC 4381.
**CPSC 5382 Compiler Construction and Theory**
Prerequisites: Graduate Standing. The fundamental principles of compilers such as finite state machines, context free grammar, are studied. The compilation techniques covered include compile and run-time symbol tables, lexical analysis syntax analysis, semantic analysis, object code generation, error diagnostic and optimization. Three hours lecture. Three credit hours. Not open to students with credit for CPSC 4382.

**CPSC 5383 Artificial Intelligence**
Prerequisites: CPSC 2380; MATH 1452 and MATH 2310, junior/senior undergraduate or entry graduate level standings. Introduction to machine intelligence. Emphasis upon different paradigms for problem solving such as various state-space search strategies and other approaches. Exposure to one or more key areas such as robotics, logic programming, machine learning, expert systems, planning, neural networks, natural language processing, reasoning, under uncertainty, etc. Three hours lecture per week. Three credit hours. Students with credit for 4383 cannot take 5383 for credit.

**CPSC 5384 Computer Networks**
Prerequisites: Graduate Standing. This course is an introduction to the design and analysis of computer networks. The course covers a breadth of topics including computer communications architecture and protocols, local and wide area networks, IP networks, bridging and routing, Ethernet, wireless LANs, sockets programming, and distributed applications. Three hours lecture; three credit hours. Not open to students with credit for CPSC 4382.

**CPSC 5387 Distributed Computing**
Prerequisites: CPSC 3383. Network-based client/server computing. Topics include TCP/IP, object-oriented technology, distributed objects and their interfaces, JDBC, remote method invocations, COBRA, and web-based software system architecture. Graduate students are required to research a topic and write an in-depth paper. Three credit hours. Students with credit for 4387 cannot take 5387 for credit.

**CPSC 5388 Smart Software Systems**
Prerequisites: Graduate Standing. Ability to perform independently and as a team member is absolutely essential. A working knowledge of C, C++, Java and a course in digital logic/assembly language programming is very much desired. This class will involve extensive independent work with your group and the instructor to plan and implement an embedded software systems project. Three hours lecture; three credit hours. Not open to students with credit for CPSC 4388.

**CPSC 7101 Research Methodology**
Prerequisites: Graduate Standing. A one-credit course in a set of three, introducing students to the research methodology of doctoral level research in the Integrated Computing field. Research examples will be drawn from work that exemplifies the interconnecting research opportunities across the Integrated Computing discipline.
**CPSC 7102 Research Tools**  
Prerequisites: Graduate Standing. A one-credit course in a set of three, introducing students to the research methodology of doctoral level research in the Integrated Computing field. Research examples will be drawn from work that exemplifies the interconnecting research opportunities across the Integrated Computing discipline.

**CPSC 7103 Research Applications**  
Prerequisites: SYEN / IFSC / CPSC 7101 and 7102. A one-credit course in a set of three, introducing students to the research methodology of doctoral level research in the Integrated Computing field. Research examples will be drawn from work that exemplifies the interconnecting research opportunities across the Integrated Computing discipline. Students may with permission of the other Graduate Coordinator concurrently enroll in this course with either SYEN / IFSC /CPSC 7101 or 7102.

**CPSC 7190 Graduate Seminar**  
Prerequisite: Graduate Standing. A weekly expository lecture series by the faculty and invited speakers on current research areas.

**CPSC 7301 Essentials of Computer Software**  
Prerequisites: Graduate Standing with an engineering or science degree and at least one programming language of C, C++ or Java. This course introduces students to important concepts and techniques in developing software and internet based applications. Topics include: programming language paradigms, data structures, algorithms and programming environments: compiled versus interpreted environments, web based languages and scripting techniques, data access techniques and support for secure protocols, methods for querying and updating structured web documents and semi structured data. Language issues in the development and management of commercial projects, etc. This course and CPSC 7302 will prepare the science or engineering graduates for the computer science master program and the credit of this course is not counted towards the requirement of the master program. Three hours lecture and three credit hours.

**CPSC 7302 Essentials of Computer Systems**  
Prerequisites: Graduate Standing with an engineering or science degree and at least one programming language of C, C++ or Java. This course takes an integrated approach to cover the major components of the complete computer system: digital logic, computer organization and architecture, programming languages and compilers, and operating systems and computer networks. This course and CPSC 7301 will prepare the science or engineering graduates for the computer science master’s program and the credit of this course is not counted towards the requirement of the master’s program. Three hours lecture and three credit hours.

**CPSC 7311 Software Engineering**  
Prerequisites: Graduate Standing and a working knowledge of C or C++. An overview of the software development paradigm to include the software life cycle, prototyping and object-orientation; reliability, quality assurance, formal methods, and CASE tools.
CPSC 7312 Parallel Processing
Prerequisites: Graduate Standing; CPSC 2380 and CPSC 3482. Concepts of parallel computing, parallel architectures and interconnection networks; parallel programming and applications; basic paradigms and primitives, programming using PVM and MPI; efficient mapping of programs, automatic parallelization of serial code.

CPSC 7313 Concurrent Software System Architecture
Prerequisite: CPSC 5373 or permission of the instructor based on an existing background in object orientation methodology. This course covers the internal issues of modern software engineering. Topics include requirements of interface definition, notation, and analysis of systems of programs; software systems architecture issues, synchronization while managing shared data stores, and ensuring the architecture supports performance goals; concurrent task structuring criteria; software architecture patterns for common categories of software systems; concurrency support including enforcing mutual exclusion, engineering for deadlock avoidance, and ensuring liveness; design for testability; architecture performance analysis, performance design patterns, and anti-patterns. Three hour lectures. Three credit hours.

CPSC 7314 Integrated Software System Engineering
Prerequisites: CPSC 4373/5373. This course covers the integration related issues of modern software engineering. Topics include but not limited to specification of use cases for a distributed application; design and development concerns such as fault tolerance, reliability, security, interoperability; how these concerns influence the placement of functionality in the distributed environment—subsystem structuring criteria; design that allows upgrades and modifications of installed distributed systems; representation of timing sequences; performance analysis of concurrent and distributed systems; design for testability; distributed architecture design patterns; other issues about testing distributed systems. Three hour lectures. Three credit hours.

CPSC 7321 Operating Systems
Prerequisites: CPSC 3380 and 3482; working knowledge of C, C++, or Java Programming Language, and UNIX. Advanced topics in operating systems; process synchronization, deadlock, concurrency; fault tolerance, protection and security; distributed operating systems, multiprocessor operating systems.

CPSC 7322 Distributed Systems
Prerequisites: CPSC 3380 and 3482; working knowledge of C, C++, or Java Programming Language, and UNIX. Foundations of distributed operating systems; design and implementation of distributed systems; communication methods for open systems; kernel facilities; file management, naming and lock synchronization; transactional services for shared data.

CPSC 7325 Software Security Assessment
Prerequisite: CPSC 5360 or Consent of Instructor. Today’s networked and complex software not only increases number of potential vulnerabilities but also increases risk associated with vulnerabilities. The industry-specific regulations further necessitate building software with the minimum number of vulnerabilities. This course delivers the know-how of dealing with software

**CPSC 7326 Malware Analysis**
Prerequisite: CPSC 4360/5360 or Consent of Instructor. Malware, despite the wide-spread use of anti-malware tools, still persists to exist in large-scale. Malware outbreaks can cost businesses large sums of money through business disruption, harming reputation, and recovery efforts. This class offers a thorough analysis of Malware including cutting edge techniques to detect and deal with it. Topics covered include History and Prevalence of Malicious Code, Types of Malicious Code, Infection Mechanisms and Targets, Virus Propagation Mechanisms, Defending against Viruses, Worms and Worm Components, Impediments to Worm Spread, Super Worms, Malicious Mobile Code, Backdoors, Polymorphic Malware, Rootkits, Process for Malware Analysis.

**CPSC 7331 Computer Architecture**
Prerequisite: CPSC 3482. A study of computer architecture fundamentals; the impact of technology on architecture cost and performance; Instruction Set Architecture; design and analysis of the building blocks of computer systems, including data path, control, and memory hierarchy; recent architectural developments.

**CPSC 7332 Advanced Computer Architecture**
Prerequisite: CPSC 7331. An in-depth study of recent advances in computer architecture; speedup architectural techniques for high performance computer systems; caches and memory hierarchy; RISC and Superscalar computer architectures.

**CPSC 7333 VLSI Design**
Prerequisite: CPSC 3482. This course introduces the principles of CMOS VLSI technology and design; design methodologies from concept to implementation of VLSI chips; Mentor Graphics and Cadence software packages that support design, layout, and verification.

**CPSC 7334 Digital Systems and Hardware Design Languages**
Prerequisites: Computer Science 3482 and working knowledge of C. Architecture of a representative 32-bit processor, system building blocks, design conventions; HDL languages; modeling, simulation and verification of the representative processor.

**CPSC 7341 Telecommunications and Networking**
Prerequisite: Graduate Standing. Fundamentals of data communications; topologies and transmission media; protocol architecture; LAN, MAN, and WAN systems; network design issues.

**CPSC 7342 Advanced Computer Networking**
Prerequisite: CPSC 7341. Advanced concepts of computer networks; network hardware and
software; preference models; data communications services; network standardization; design issues and their applications.

**CPSC 7343 Sensor Networks**  
Prerequisites: CPSC 4384/5384. This course aims to develop fundamental understanding of sensor network systems. It covers architectures and communications protocols for sensor networks. Node and network architectures, naming and addressing, time synchronization, localization and positioning, topology control, and content-based networking are all covered. At the completion of the course, students will understand how sensor networks work as intelligent and coordinated systems.

**CPSC 7351 Database Design**  
Prerequisite: CPSC 2380 and 3375, Mathematics 2310. Design process, objectives, techniques, syntactic and semantic analysis design; entity relationships model, binary and n-ary relationships, minimality of relations, recursive relationships, role-modeling structures, aggregate objects, conversion methods, implementation models, evaluating design, choosing design methodologies.

**CPSC 7352 Advanced Database Issues**  
Prerequisite: CPSC 7351. Advanced issues in distributed databases, transaction systems, database machines, database mining, expert database systems, object-oriented databases, and extended data models.

**CPSC 7361 Computer Graphics**  
Prerequisites: MATH 1305; working knowledge of C programming. Introduction to computer graphics and graphic systems; output primitives and attributes; two-dimensional graphics: geometric transformations, viewing; three-dimensional graphics: object representation, geometric and modeling transformations and viewing; illumination models and animation; user interface and interactive input.

**CPSC 7362 Advanced Computer Graphics**  
Prerequisite: CPSC 7361. Advanced concepts in two-dimensional graphics and three-dimensional graphics; object representations, geometric and modeling transformations, viewing, NURBS curves and surfaces; texture mapping, visible-surface detection methods, advanced illumination and shading models, color models and color applications; advanced animations.

**CPSC 7373 Artificial Intelligence**  
Prerequisites: CPSC 2380; MATH 1305 or MATH 1312. Undergraduate course work in artificial intelligence would be beneficial but is not required. Study of the major areas of artificial intelligence, including general problem solving, search strategies, heuristics, knowledge representation, machine learning, games, scene analysis, expert systems, robotics, natural language processing, and AI languages.

**CPSC 7374 Image Processing**
Prerequisites: MATH 1305 or MATH 1312 and a working knowledge of C programming. Study of digital image fundamentals; transformation enhancement, restoration, segmentation, compression, encoding, representation, and description of digital images.

**CPSC 7375 Machine Learning**

Prerequisites: CPSC 2380; MATH 1305 or MATH 1312. Prior course work in artificial intelligence would be beneficial but is not required. In-depth study of machine learning foundation, neural networks, learning paradigms, inductive learning, deductive learning, learning techniques, rough classifiers, fuzzy systems, genetic algorithms, lattices, pattern recognition, and applications.

**CPSC 7382 Systems Analysis and Design**

Prerequisite: Graduate standing. Analysis and design of computer information services to meet the needs of industries and businesses; intended as a real-world practicum via field study, and as a community outreach via the provision of expertise and training.

**CPSC 7383 Modeling and Simulation**

Prerequisites: CPSC 2380; MATH 1305 or MATH 1312; knowledge of statistics and probability. Performance analysis of models of various systems using analytical approaches, discrete and continuous simulation, and hybrid techniques.

**CPSC 7385 Analysis of Algorithms**

Prerequisites: CPSC 2380; MATH 2310. A study of categories of computer algorithms: greedy, divide-and-conquer, recursive, and probabilistic; performance analysis techniques: order relations, recurrence relations, generating functions, induction, simulation; storage efficiency; complexity theory.

**CPSC 7386 Compiler Design**

Prerequisites: CPSC 2380 and CPSC 3383; MATH 2310. Grammars, languages, and the anatomy of compilers: scanners, parsers, semantic analyzers, type systems, run-time environments, intermediate code generation, code generation, and code optimization.

**CPSC 7398 Graduate Project**

Prerequisites: Graduate Standing and consent of the student’s graduate advisor. Students, under faculty supervision, will conduct directed research on a particular problem or area of computer science in some depth, and will produce an appropriate project and report based on their investigations.

**CPSC 7399 Selected Topics**

Prerequisites: Graduate Standing, consent of instructor. Various topics in applied computer science, selected from the areas of intelligent systems and computer systems design. Offered on demand.

**CPSC 7100 – 7400 Independent Study**

Prerequisite: Graduate Standing, instructor permission. Provides an opportunity for doctoral
students to learn material relevant to their research that is not offered in a regular course. Students must take this course with an instructor who will guide the study. A copy of work done in the course will be submitted at the end of the semester.

**CPSC 8100-8600 Thesis**
Prerequisite: Consent of thesis advisor. Scholarly investigation of a selected problem in computer science culminating in a written, orally defended thesis. Maximum of six hours may be applied to M.S. Variable credit of one to six hours.
ETAS 203, (501) 569-8133, (501) 569-8341 (fax)

Master of Science in Construction Management

The Master of Science (M.S.) in Construction Management develops upper-level management personnel for the construction industry, while helping students to pass the Certified Professional Constructor (CPC) examination administered by the American Institute of Constructors (AIC).

Admission Requirements

All applicants to the M.S. program in Construction Management must satisfy the requirements of the UALR Graduate School in addition to any requirements specific to the Donaghey College of Engineering and Information Technology. To be considered, an application must contain the following items:

- A bachelor’s degree in construction management or construction engineering, civil engineering, architecture, business, or similar areas is required. Students with educational backgrounds different from construction management may need to take prerequisite courses. Applicants must have an overall undergraduate grade point average (GPA) of 3.0 (4.0 scale).

- The Graduate Record Examination (GRE) General Test should be taken within five years of application. The applicant must have a minimum verbal reasoning GRE score in the range of 146-150, a minimum quantitative reasoning GRE score in the range of 150-154, and a minimum score of 3.5 on the analytical writing test. The GRE requirement will be waived if the GPA is 3.5 or higher (4.0 scale).

- Demonstrated proficiency in written English (via the TOEFL exam) – for applicants whose native language is not English. Applicants’ scores must exceed 525 (paper-based test) or 197 (computer-based test) or 71 (internet-based test). Applicants with scores below but close to 525 (197 if computer-based test or 71 internet-based test) may be admitted provisionally upon the recommendation of the Graduate Coordinator to the Dean of Graduate School, and allowed to fulfill the TOEFL requirement as specified in the Graduate School admissions policies.

- Demonstrated proficiency in spoken English (via the Test of Spoken English (TSE) or the American English Oral Communication Proficiency Test (AEOCPT) exams) – for applicants whose native language is not English and who are seeking financial support via a teaching assistantship. The student must get a score of 80% or higher on the AEOCPT or the TSE.

- Three letters of recommendation.
- Official college transcripts including grades and curriculum for undergraduate and (if applicable) graduate studies.
- Written statement by the applicant regarding the reasons (e.g. interests, relevant experience, and goals) why he or she should be considered for this M.S. program.
- A resume detailing any professional work experience, published papers, or presentations.

The department graduate faculty will evaluate the compatibility between the applicant’s background, research interests, and communication skills vis-a-vis the M.S. program when making admission decisions, and may decline to admit an otherwise qualified application based on a lack of fit with the program.

Students may apply to the MS program at any time. Applicants to the M.S. program are ordinarily expected to start in the fall semester of each year. Foreign national graduate students who are candidates for admission must process their visa applications so that they can arrive in the United States and attend orientation at the International Student Services (ISS). Those students who are not able to obtain approval for entry into the United States in order to meet this timeline may request an admission deferral to attend the following semester or academic year.

Program Requirements

Program Options

The Master of Science degree in Construction Management offers two options:

1. **Thesis Option:** 30 credit hours beyond the baccalaureate degree, including six credit hours of thesis work.
2. **Non-Thesis Option:** 30 credit hours beyond the baccalaureate degree, including a three credit hour project.

For both thesis and non-thesis options, the work must include at least 18 credit hours of 7000-level or above work. A maximum of 12 credit hours (with grades of B or greater) can be 5000-level courses, and a maximum of nine credit hours (with grades of B or greater) of graduate courses can be taken from programs outside the construction management program or from another university.

Program Requirements

Students with backgrounds outside of construction management or construction engineering are required to take the following background courses:

CNMG 1205 Drawings and Specifications
CNMG 2313 Construction Materials
CNMG 2314 Mechanical, Electrical, and Plumbing (MEP) Systems
CNMG 2323 Construction Administration
CNMG 3339 Estimating I
CNMG 4211 Estimating II
CNMG 4329/5329 Construction Planning and Scheduling
CNMG 4342/5342 Construction Safety

Students will develop their own programs of study in cooperation with appropriate faculty and in consideration of the courses and facilities available. The student’s plan of study must be developed in conjunction with the student’s advisor with approval by the program coordinator.

All master’s course work must be completed with a minimum overall graduate GPA of 3.0. If a student receives one “C” or lower grade, the student will be warned that this academic performance is unacceptable and the department graduate faculty will review the student’s performance and recommend corrective action.

Transfer of Credit

Course credit may be granted to the student for completing equivalent graduate coursework from other institutions based upon the applicability of the courses to thesis work and the student’s educational goals. Such credit must be exclusive of thesis or other exit project credits, be no more than nine credit hours, be no more than five years old at the time of transfer, and must have a letter grade of B or greater. Students interested in requesting credit transfer should discuss the request with their advisor and the program coordinator. The dean of the Graduate School must also approve the request before the transfer of credit can be granted.

M.S. Advisor

Each student will choose a faculty member to be his or her mentor through the program. New students will be assigned an advisor by the program coordinator prior to the start of classes. Students may change their advisors until they have completed the first semester. After that, changes in a student’s advisor will be granted only in special circumstances.

Thesis Committee

A student choosing the thesis option will be guided by the student’s thesis committee, comprising the student’s M.S. advisor (serving as committee chair) and two members of the department graduate faculty. Successful completion of the thesis will require an oral defense in which the student will defend his or her findings and conclusions. Policies and procedures for passing, failing, and repeating the thesis defense will be in compliance with the UALR Graduate School policies.

Courses in Construction Management and Civil and Construction Engineering (CNMG)
**CNMG 5313 Construction Management Fundamentals**
Prerequisite: consent of instructor. This course provides an overview of construction management fundamentals such as delivery systems, estimating, scheduling, and administration. It also covers construction practices such as safety, construction materials and methods, quality, and productivity. Topics include site work, concrete, masonry, steel, rough and finish carpentry, thermal and moisture protection, doors and windows, finishes, electrical and mechanical systems. Three hours lecture. Three credit hours. Students with credit for CNMG 4313 may not take CNMG 5313 for additional credit.

**CNMG 5329 Construction Planning and Scheduling**
Prerequisite: CNMG 4211 or equivalent. An in-depth study of the process of creating and monitoring a construction project schedule. Creation of project schedules on a variety of scheduling software, with primary focus on Primavera. Three hours lecture. Three credit hours. Dual-listed in the UALR Undergraduate Catalog as CNMG 4329. Students cannot receive graduate credit for CNMG 5329 if they have previously taken CNMG 4329.

**CNMG 5334 Construction Contracts and Law**
A study of construction contracts in relation to project delivery systems and the basic principles of construction law. Case studies are used to analyze selected areas that affect the construction process. Topics include standard agreements and conditions, negligence, risk, indemnities, modifications, mechanics lien, claims, dispute resolution, conflicts of interest, ethical consideration, and labor law. Three hours lecture. Three credit hours. Dual-listed in the UALR Undergraduate Catalog as CNMG 4334. Students cannot receive graduate credit for CNMG 5334 if they have previously taken CNMG 4334.

**CNMG 5342 Construction Safety**
A study of the principles of construction safety management and OSHA 29 CFR PART 1926. The OSHA Construction Industry Training Course 500 topics covered in depth. Students develop a company safety plan and hazardous communications program, perform safety analysis, conduct safety meetings, and write accident investigation reports. Students complete the topic requirements for the OSHA 10-hour and 30-hour Construction Safety and Health training card. Two hours lecture and two hours lab. Three credit hours. Dual-listed in the UALR Undergraduate Catalog as CNMG 4342. Students cannot receive graduate credit for CNMG 5342 if they have previously taken CNMG 4342.

**CNMG 5361 Green Construction**
Overview of design and construction delivery systems for high performance green buildings; relevant criteria and established guidelines; green standards; high performance green buildings and sustainability; vocabulary associated with sustainability and green buildings; physical limitations of materials. Three hours lecture. Three credit hours. Dual-listed in the UALR Undergraduate Catalog as CNMG 4361. Students cannot receive graduate credit for CNMG 5361 if they have previously taken CNMG 4361.

**CNMG 5389 Professional Engineering Licensure**
Prerequisite concurrent: registration for the Fundamentals of Engineering exam, or consent of instructor. Legal, regulatory, and ethical issues related to the practice of engineering; preparation for engineering licensure examinations. Two hours lecture. Three hours lab. Three credit hours. Cross listed as SYEN 5389. Dual-listed in the UALR Undergraduate Catalog as CNMG 4389. Students cannot receive graduate credit for CNMG 5389 if they have previously taken CNMG 4389.

**CNMG 5399 Special Topics**
Designed to meet special needs of students or industry to cover the application of construction management specific problems. Three credit hours.

**CNMG 7100, 7200, 7300 Independent Study**
Topic and method of procedure must have approval of the supervising faculty member. Typically four to six hours per week of work on the project for each hour of credit earned. The exact hourly commitment per week and credit hour value depends on the nature of the project and must be agreed on in advance by the student and instructor, and must be submitted in writing to the student’s graduate advisor. With approval, may be repeated for up to nine credit hours. One to three credit hours.

**CNMG 7318 BIM and 4D Simulation**
Prerequisite: CNMG 4218 or equivalent. Advanced techniques of using Building Information Modeling (BIM) together with scheduling control to do 4D simulation. Potential applications of computer and information systems in construction industry. Three hours lecture. Three credit hours.

**CNMG 7345 Applied Construction Management**
Prerequisites: CNMG 4211 and CNMG 5329 or equivalent, or consent of the instructor. This course discusses design, development, estimating, scheduling, contracting, and administering small construction projects, including extensive site and feasibility analyses. Three hours lecture. Three credit hours.

**CNMG 7376 International Construction Business Management**
Construction contracting, with emphasis on international economics, marketing, contracts, design, and specifications. Issues of local construction techniques, construction marketing, international construction, sustainability, global economics, and influence on construction of local culture, traditions, architecture, history, and political climate. Three hours lecture. Three credit hours.

**CNMG 7385 Construction Management Graduate Project**
Prerequisites: graduate standing, completion of at least 18 graduate credit hours in the M.S. in construction management program, or consent of the advisor. Students, under faculty supervision, will work on practical problems related to Construction Management, and will submit a project report documenting the results. Three credit hours.
**CNMG 7399 Special Topics**
Prerequisites: consent of instructor. Selected advanced topics in construction. Three hours lecture. Three credit hours.

**CNMG 8100, 8200, 8300, 8400, 8500, 8600 Construction Management Master’s Thesis**
Prerequisites: graduate standing, completion of at least 18 graduate credit hours in the M.S. in Construction Management program, or consent of the thesis advisor. Scholarly investigation of a selected problem in an area related to construction management culminating in a written thesis and an oral defense. A maximum of six hours may be applied toward the M.S. degree. Variable credit of one to six hours.
Graduate Certificate in Data Science

Graduate Certificate in Data Science

The graduate certificate in Data Science consists of 12 graduate credits, which may be completed in the evenings or online. This certificate will provide individuals with a focused collection of course work dealing with complex information systems and data analytics. This program is designed for post-baccalaureate students and working professionals who are interested in moving into advanced data solution developers and data analyst leadership roles within their organizations or in preparation for entering master’s programs. The program is accessible to both day and evening students and both full-time and part-time students. In addition, a distance education option allows students to participate in the program via live webcasting.

Admission Requirements

- Baccalaureate degree from an accredited institution. Candidates with a background in computer programming, database concepts, and applied statistics, or who have professional experience in an information analytics role, will be the most prepared to enter and successfully complete the program.
- Cumulative grade point average of at least 3.0 on a 4.0 scale
- The GMAT and GRE scores are not required
- Completion of any remedial course work that may be specified by the department. Students seeking regular admission to the program are expected to have completed (with a grade of B or better in each course) undergraduate course work equivalent to the following UALR undergraduate courses:
  - IFSC 2300 Object-oriented Software
  - IFSC 3320 Database Concepts
  - STAT 2350 Introduction to Statistical Methods

Additional Information

- Concurrent enrollment in the data science graduate certificate and MSIS program is permitted (e.g., MSIS students are eligible to receive certificates upon completion of the appropriate subsection of the MSIS curriculum).
- Students in the data science graduate certificate program must apply to the UALR Graduate School through the online application page. The certificate program code is DASC-GC.

For more information about the graduate certificate in data science, contact the program coordinator.
Conditional Admission

Applicants with a baccalaureate degree who fail to meet one or more of the other requirements for regular admission may be granted conditional admission. For conditionally admitted students, regular admission status will be granted once the student has satisfied the stipulations mentioned in the admission letter.

Program Requirements

The Data Science graduate certificate requires the completion of 12 credit hours, as described below.

Required Courses

IFSC 5345 Information Visualization
IFSC 7320 Database Systems
or CPSC 7351 Database Design
IFSC 7360 Data and Information Privacy
IFSC 7370 Data Science and Technologies

Graduation Requirements

Successful completion of the 12 hours of course work outlined above with a GPA of at least 3.0.
Doctor of Philosophy in Engineering Science and Systems

The Engineering Science and Systems doctoral program leading to the Ph.D. degree is housed in the Donaghey College of Engineering and Information Technology. Faculty, curriculum, and resources for this program are contributed by five departments: Systems Engineering, Computer Science, Information Science, Engineering Technology, and Construction Management. The program is designed to provide a collaborative, interdisciplinary framework of graduate studies and research in engineering with exposure to the systems approach that is increasingly the hallmark of current research and development in the global engineering community. Students enrolled in the Engineering Science and Systems Ph.D. program can select one of the four following tracks:

- **Systems Engineering**

  The Systems Engineering track focuses on design and analysis of systems and their architecture, integration of systems, decision and risk analysis, simulation, and optimization of systems that are part of the technical infrastructure that supports an organization’s application and information needs.

- **Electrical and Computer Engineering**

  The Electrical and Computer Engineering track focuses on embedded systems, robotics, measurement techniques, design of analog and digital electronics and circuits, power systems, digital systems, coding, software systems and operating systems.

- **Telecommunications and Networking Engineering**

  The Telecommunications and Networking Engineering track focuses on communications and mobile networking and protocols, advanced digital communications, digital signal processing, and antennas and wireless systems.

- **Mechanical and Materials Engineering**

  The Mechanical and Materials Engineering track focuses on advanced solid and fluid mechanics, MEMS and microsystems, vibration analysis, applied numerical and finite element methods, and smart materials.
Admission Requirements

In addition to the UALR Graduate School admission requirements, the applicants for the Ph.D. program in Engineering Science and Systems must also meet the following criteria:

- **Education:** Applicants must have a bachelor’s degree in engineering, technology, science, or related discipline. Applicants with only a bachelor’s degree must have an overall undergraduate GPA of 3.0 or 3.3 on the last 60 credit hours. Alternatively, applicants with a master’s degree in engineering should have a master’s GPA of 3.3 or better.

- **Standardized test scores:** Applicants are required to take the GRE test. Applicants must have the following minimum scores on the following tests:
  - **GRE test:** a score of 146 on the Verbal Reasoning section and a score of 155 on the Quantitative Reasoning section. Applicants should also have a score of 4.5 in the Analytical Writing section.
  - **English language requirement:** International students must satisfy the Graduate School TOEFL or IELTS tests requirements.

- **Statement of purpose:** Applicants are required to submit a personal statement that should include their background and qualifications for doctoral studies, and emphasize their educational and research interests they intend to pursue at UALR.

- **Letters of recommendation:** Applicants should make arrangements to for have three letters of recommendation submitted to UALR, on their behalf, by individuals familiar with their academic background and educational interests.

The Engineering Science and Systems Governance Committee will assign a track at the time of admission to each Ph.D. student after considering the student’s past academic credentials, as well as student’s request for a track.

Conditional Admission

Applicants who do not meet all the admission requirements may be recommended for conditional admission by the Engineering Science and Systems Governance Committee. The conditionally admitted students must fulfill the requirements specified by the UALR Graduate School and the Engineering Science and Systems Governance Committee.

Graduate Assistantships

A limited number of graduate assistantships that support teaching and research opportunities are available to qualified full time students. Tuition is paid for nine credits per semester, and a stipend is provided for living expenses. Students must pay registration fees, buy textbooks, and purchase any necessary support materials. For more information about graduate assistantships, the online application process, and other financial assistance opportunities, visit the Engineering Science and Systems doctoral program website. A student supported by a graduate assistantship must be a registered full time student taking at least nine credit hours during the fall and spring
Transfer of Credit

Transferability of credit is determined by the Engineering Science and Systems Governance Committee based upon the applicability of the courses selected for student’s dissertation work and educational goals.

Program Requirements

The program consists of a total of 76 credit hours, which include 17 credit hours of program core courses, nine credit hours of track core courses, 12 credit hours of elective courses, and 38 credit hours of dissertation research. In addition, the student is required to:

- Maintain acceptable academic performance. If a student receives one C grade in his/her course work, he/she will be warned that his/her performance is unacceptable and that his/her status will be reviewed by the Engineering Science and Systems Governance Committee, which will suggest corrective actions. A student receiving two C grades or either a D grade or an F grade in his/her course work will be dismissed from the program, pending review by the Engineering Science and Systems Governance Committee;
- Pass candidacy examinations;
- Pass proposal defense;
- Publish and present at least one paper in a peer-reviewed national/international conference;
- Have at least one paper accepted for publication in an international reputed journal with the student as the first author; and
- Pass dissertation defense.

Engineering Science and Systems Curriculum

The student’s plan of study must be developed in conjunction with his/her Doctoral Dissertation Committee and filed with the appropriate track coordinator, as well as, the Engineering Science and Systems graduate coordinator.

Program Core

The program core provides students an introduction to the systems approach to engineering, as well as the mathematical and research methodologies and tools needed to successfully complete the Ph.D. studies. The 17 credit hours of program core courses are listed below:

Engineering systems component – Three credit hours

SYEN 7311 Systems Design and Analysis
Engineering seminar component – Four credit hours (one credit hour per semester for four semesters)
SYEN 7192 Graduate Seminar

Engineering ethics component – One credit hour
SYEN 7118 Research Ethics in Science and Engineering

Engineering research methodology component – Three credit hours
CPSC/IFSC/SYEN 7101, 7102, 7103 Research Methods

Engineering mathematical foundations component – Six credit hours
As advised by the Doctoral Dissertation Committee

Program Track Courses
The track courses consists of both core and elective courses, as follows:

Track core courses: Nine credit hours.

Elective courses: 12 credit hours.

A list of the core courses for each of the four program tracks and examples of elective courses are presented below. Students must choose three of the four listed core courses under their chosen track, and four elective courses, usually from the ones listed under their chosen track. Student may, with their advisors’ permission, choose elective courses from other tracks as necessary to further their research.

Systems Engineering Track

Core courses:
SYEN 7312 System Architecture and Design
SYEN 7313 System Management and Evaluation
SYEN 7314 Multicriteria Decision and Risk Analysis
SYEN 7316 Advanced Systems Simulation

Elective courses examples:
SYEN 7342 Networks and Combinatorial Optimization
SYEN 7315 Complex Engineered Systems
CPSC 7373 Artificial Intelligence
CPSC 7383 Modeling and Simulation
IFSC 7310 Information Systems Analysis
INFQ 7318 Total Quality Management and Statistical Quality Control

Electrical and Computer Engineering Track

Core courses:
SYEN 7302 Advanced Electronics for Instrumentation
SYEN 5332 Applied Operating Systems/CPSC 7321 Operating Systems
SYEN 5354 Power Systems Analysis
SYEN 5366 Advanced Digital Systems

Elective courses examples:
SYEN 7306 Real-Time Embedded Systems
SYEN 7331 Transducers and Real-Time Control
SYEN 7332 Advanced Operating System Design
CPSC 7321 Operating Systems
CPSC 7331 Computer Architecture
CPSC 7374 Image Processing

Telecommunications and Networking Engineering Track

Core courses:
SYEN 5310 Introduction to Signal Processing/ SYEN 5350 Digital Signal Processing
SYEN 5353 Advanced Digital Communications
SYEN 5356 Radio Frequency Techniques and Systems
SYEN 5355 Mobile Multimedia Internet/CPSC 7341 Telecommunications and Networking

Elective courses examples:
SYEN 7357 Advanced Antennas for Wireless Systems
CPSC 7341 Telecommunications and Networking
CPSC 7343 Sensor Networks
CPSC 7374 Image Processing
IFSC 7321 Information Science: Principles and Theory

Mechanical and Materials Engineering Track

Core courses:
SYEN 5371 Introductory Continuum Mechanics
SYEN 5375 Mechanical Vibrations/SYEN 5384 Computer Methods in Fluids and Heat Transfer
SYEN 5383 Finite Element Analysis
SYEN 7317 Nanostructural Materials: Physical and Chemical Properties / SYEN 7318 Micro-
Nano-Fabrication

Elective courses examples:
SYEN 7307 Smart Materials
SYEN 7374 Elasticity
SYEN 7376 Fracture Mechanics

Dissertation Research Courses:

Students are required to complete at least 38 credit hours of doctoral dissertation research courses during their doctoral studies, using one of the below designations:

CPSC/IFSC/SYEN 9100-9900 Doctoral Research Dissertation

Candidacy Exams

The program is designed so that the student is exposed to a breadth of knowledge through the program core and a depth of knowledge through the track core. The candidacy exam will have a written and an oral component. The written component will test the student on the fundamental knowledge at the advanced undergraduate level, whereas the oral component will test the student’s ability to conduct research in his/her area of interest. The following candidacy exam structure is followed:

1. The student can take the candidacy exam no sooner than the second semester he/she is in the program and no later than the third semester he/she is in the program.
2. The student will have to officially declare his/her intention to take the candidacy exam by the end of the semester prior to the semester in which he/she will take the exams for the first time.
3. The student will have to attempt both components in the same semester, and will need to pass each of the components separately. If the student fails to pass one or more components in the first attempt, he/she will have to retake those components in the next semester. Failure to pass the exam in two attempts will result in dismissal from the program, pending review of the Engineering Science and Systems Governance Committee. This review will be completed and a decision conveyed to the student by the end of the academic year when he/she has taken the exam.
4. A sample written exam for each track and a sample research topic for the oral exam will be on file with the graduate coordinator. The students will have access to the sample exam for the purposes of familiarizing themselves with the written component of the candidacy exam.
5. Decisions of the Track Candidacy Exam Committee will be supported by a minimum of 2/3 majority of the committee members present and will be any one of the following:
   i. Pass
   ii. Pass with remedial course work
   iii. Fail; in this case, the student will retake the oral component in the next semester on the
same research topic; a new report will have to be submitted by the student prior to retaking the oral exam.

Written Component:
The written exam for each track will be one four-hour exam, and there will be only one exam for each track.

The syllabus of the written exam will be identical for the fall and spring semester exams in a given academic year, and will be published at the beginning of the spring semester of the prior academic year. The study materials for each track will also be recommended.

The student will have passed the exam if her/his overall grade in the written exam is 70% or higher.

Oral Component:
The oral exam for each student taking the exam will be of one-hour duration.

Student will be given a research topic on which to submit a written report. This report shall be submitted no later than one month from the date the student was assigned the topic.

The student will be provided with a template. The same template will be used for all the tracks. The submitted report will have to adhere to the guidelines of the template.

Using the written report as the basis, the student will be orally tested by the Track Candidacy Exam Committee. The oral exam will be scheduled no earlier than two weeks after the student has submitted the report.

Proposal Defense
At least two years prior to the dissertation defense, candidates must present their research proposal to their Doctoral Dissertation Committee. At the completion of the examination, the Doctoral Dissertation Committee will vote to either pass or fail the student. Students who fail the proposal defense will have to repeat the defense within a semester of their first attempt. If the student fails the proposal defense for a second time, he/she will be dismissed from the program, pending review of the Engineering Science and Systems Governance Committee.

Dissertation Defense
In order to complete the requirements for the doctoral degree, students will prepare and successfully define a written dissertation in accordance with the format and procedures dictated by the Graduate School. Students must orally defend their completed doctoral research to their Doctoral Dissertation Committee. At the completion of the examination, the Doctoral Dissertation
Committee will vote to either pass or fail the student. If two or more negative votes are cast by the committee members, the student is considered to have failed the exam and will be dismissed from the program, pending review of the Engineering Science and Systems Governance Committee.

Doctoral Dissertation Advisor

A student admitted to the doctoral program can declare an advisor, with advisor’s approval, no earlier than the second semester that he/she is in the program. The student is required to meet with faculty eligible to mentor him/her as dissertation advisor before the student can declare the dissertation advisor. As part of the process, the student will have to interact/work with at least three faculty members.

Doctoral Dissertation Committee

The Doctoral Dissertation Committee can be constituted once the student has declared his/her doctoral dissertation advisor, and no later than the second semester that the student has been in the program. The committee will include a minimum of five members and a maximum of seven members. At least four members have to be Engineering Science and Systems program faculty. The committee can have one or more external members who are not Engineering Science and Systems program faculty. If the dissertation advisor and the doctoral student are affiliated with different tracks, it is required that at least one Engineering Science and Systems program faculty in the committee belong to the student’s track.

Courses in the Engineering Science and Systems Doctoral Program

The catalog description of the program core, track core and elective courses, and the dissertation research courses that are part of the Engineering Science and Systems Doctoral Program, is provided in the “Systems Engineering,” “Computer Science,” “Information Science,” and “Information Quality” sections of this catalog. Other courses may be approved in consultation between the student and his/her Doctoral Dissertation Committee.

Up to twelve credit hours may be granted to the student for completing equivalent graduate coursework at other institutions. Such credit must be exclusive of thesis or other exit project credits, be no more than five years old at the time of transfer, and must have a letter grade of B or better. In some cases students may be required to balance their transfer credit with a corresponding increase in research hours. Students interested in requesting a credit transfer should discuss the request with their doctoral dissertation advisor and appropriate track coordinator. The request must also be approved by the Engineering Science and Systems graduate coordinator and the dean of the Graduate School before the transfer of credit can be granted.
Geospatial Technology

Admissions | Program Requirements | Graduate Courses

ETAS, Room 575, (501) 569-8009

Graduate Certificate in Geospatial Technology

Geospatial Technology (GT) is an expanding and evolving field that requires a background in the concepts and skills of geographic information systems (GIS), global positioning systems (GPS) and remote sensing (RS). There is a growing demand for programs to provide training in GT in many fields, including geology, geography, biology, environmental science, agriculture, urban planning, business, engineering, and criminal justice (forensic science). Certificate programs accomplish the goals of providing training and certification for technicians and working professionals to meet the needs of the workforce and professional development in the geospatial disciplines. This certificate focuses on the fundamental concepts, applications, and technology of GIS, GPS, and RS.

GT is one of the fastest growing information science disciplines. Although geographical by nature, the growth of GIS can be partially attributed to its application by a wide variety of businesses and governmental agencies. As such, the use of GIS is becoming more ubiquitous in careers falling outside the traditional definition of geoscience. Employment skills in fields such as criminology, marketing, engineering, and agriculture as well as more traditional geospatial fields such as land use planning, site location, geology, and environmental monitoring rely heavily on GIS in day-to-day work. The certificate program offered by the Department of Earth Science is designed to provide the GIS skills necessary for both geologists and professionals working outside the traditional bounds of a geology degree. By completing the GIS certificate program, students will be prepared to enter a highly technical and growing career field.

Upon completion of the certificate requirements, students will be able to

- Perform database entry, manipulation, and query;
- Perform basic to advanced geospatial analysis functions such as overlay, buffer, proximity analysis, and network analysis;
- Produce hardcopy spatial graphics on a variety of output devices;
- Input spatial data via tablet and on-screen digitizing and scanning;
- Collect primary data via GPS;
- Demonstrate competence in working with standard geospatial data (i.e., geo databases, digital elevation models, digital line graphs, orthophotography, and satellite imagery);
- Formulate and complete a comprehensive, directed project related to a geospatial problem.

Admission Requirements
A baccalaureate degree from an accredited institution
A cumulative GPA of at least 2.75

Program Requirements
Program requirements for the Geospatial Technology certificate program are 18 hours, including the following courses:

Core Courses (Eight hours):
ERSC 5421 Introduction to GIS
ERSC 5422 Applied GIS

Elective Courses (Eight hours):
Students must take 8 hours at the 5000-level or above. Courses must be related to geospatial technology or directly support geospatial projects. The director of the program must approve elective courses for credit toward the GT certificate. Examples of elective courses include the following:
ERSC 5426 Introduction to Remote Sensing
ERSC 5321 Geomorphology
ERSC 5322 Environmental Geology
ERSC 5371 Engineering Geology
URST/POLS 5355 Urban Planning and Land Use
ENHS 5430 Environmental Epidemiology

Capstone Courses (Two hours)
IGSC 7195/7295/7395* Internship in Integrated Science and Mathematics
IGSC 7391* Cooperative Education in Integrated Science and Mathematics
IGSC 7192/7292/7392* Independent Study
* Capstone course credits above 2 hours count toward elective credit hours

Courses in Earth Science

ERSC 5100, 5200, 5300 Independent Problems
Prerequisite: consent of the instructor. This course offers the student an independent laboratory or field study of a problem in the earth sciences in consultation with an instructor. Credit varies per problem topic.

ERSC 5199, 5299, 5399, 5499 Special Topics
Prerequisite: consent of the instructor. This course offers study in advanced and specialized topics in the geological sciences especially those of current interest. Refer to the semester’s schedule for the special topics offered. Credit will vary depending upon the course topic. One, two, three, or four hours or equivalent per week. One, two, three, or four credit hours.

**ERSC 5322 Environmental Geology**
Prerequisite: ERSC 1302/1102 and MATH 1302 or consent of instructor. Humans as a geologic agents, geologic hazards in the environment, geology and land use studies, urban geology, and case histories. Dual-listed as ERSC 4322. Three hours lecture per week. Three credit hours.

**ERSC 5323 Geology of Arkansas**
Prerequisites: ERSC 1302/1102 or 1303/1103 or consent of instructor. Regional geomorphology, structure, stratigraphy, and paleontology of Arkansas. Includes field trips to Ozark dome, Ouachita fold belt, Arkansas Valley, and Mississippi Embayment/Gulf Coastal Plain. Dual-listed as ERSC 4323. Three hours lecture per week, field trips. Three credit hours.

**ERSC 5371 Engineering Geology**
The study of the interaction of rock, soil, and geologic processes with the engineering activities of man by applying geological data, techniques and principles. The integration of geological, geotechnical, and geophysical investigative methods will be emphasized. Lecture topics will include soil and rock mechanics and rock deformation, the assessment of the spatial-temporal variability of sub surface material, slope stability analysis and slope failure mitigation, earthquake engineering, hydrologic systems management, and the application of GIS and geology. Two hours lecture, two hours laboratory per week. Three credit hours.

**ERSC 5372 Surface Water Hydrology**
Prerequisites: ERSC 1302/1102 or higher and MATH 1311 or 1451, or consent of the instructor. Hydrologic cycle, basin analysis, runoff analysis, stream hydraulics, flooding, case histories, field methods in hydrology, hydrologic planning. Three hours lecture per week. Three credit hours. Dual-listed as ERSC 4372. Students with credit for ERSC 4372 cannot take ERSC 5372 for credit.

**ERSC 5391 Cooperative Education in Earth Science**
Prerequisites: Consent and approval of assignment by advisor. Supervised professional experience related to students discipline with governmental agencies, industry and consulting firms. This course requires a minimum of 200 semester work hours. Dual listed as ERSC 4391. Three credit hours.

**ERSC 5419 Geomorphology**
Prerequisites: ERSC 1302/1102, ERSC 3320, or consent of instructor. The study of form and process at the Earth’s surface. The interactions between erosional and depositional processes at the Earth’s surface with tectonic processes operating within the Earth are examined with respect to landform evolution. Laboratory includes the analysis of maps, digital imagery, and field applications of GPS/GIS technology. Dual-listed as ERSC 4419. Three hours lecture, two hours laboratory or field study per week. Four credit hours.
**ERSC 5421 Introduction to Geographic Information Systems**
Prerequisites: consent of instructor. This course introduces Geographic Information Systems (GIS) and the use of spatial data for problem-solving in science. The lecture portion of the course focuses on the data models used to represent spatial features and on the processes involved in creating, acquiring, analyzing, and displaying georeferenced information. The laboratory portion of this course employs a project-based methodology including applications from geology, biology, environmental science, and political science to foster basic GIS software proficiency. Dual-listed as ERSC 4421. Three hours lecture, two hours laboratory per week. Four credit hours.

**ERSC 5422 Applied GIS (Geographic Information Systems)**
Prerequisites: ERSC 5421/4421 or consent of instructor. This course builds on the fundamental concepts of Geographic Information Systems (GIS) from ERSC 5421/4421. It focuses on advanced applications in GIS with an emphasis on problem-solving, advanced analysis techniques, and database management. Dual-listed as ERSC 4422. Two lecture hours per week, four laboratory hours. Four credit hours.

**ERSC 5426 Introduction to Remote Sensing**
Prerequisites: ERSC 5421/4421 or consent of instructor. This course introduces the fundamentals of manipulating and interpreting the electromagnetic spectrum. The lecture portion of the class covers concepts of remote sensing, including how data is collected, processed, analyzed, and interpreted. The lab portion of the class is focused on building proficiency in several images processing software programs and the use of spatial data for problem-solving in science. Dual listed as ERSC 4426. Three hours lecture, two hours laboratory or field study per week. Four credit hours.

**ERSC 5473 Hydrogeology**
Prerequisites: ERSC 1302/1102 or ERSC 1303/1103 and MATH 1302 or higher. Ground water occurrence, flow, porosity, permeability, aquifer analysis, geology of ground water, water well logging, water chemistry, water quality, well development, case histories, field methods, hydrogeologic planning. Dual-listed as ERSC 4473. Three hours lecture and two hours lab per week. Four credit hours.

**ERSC 7399 Selected Topics**
Prerequisites: four undergraduate geology hours, professional experience in some area of earth science, consent of instructor. Topics include modern geology, meteorology, oceanography; assists professionals to remain current in these rapidly expanding fields; laboratory emphasis on creative problem solving, field trips. Two hours lecture, three hours laboratory per week. Offered in summer.
Master of Science in Information Quality

The Master of Science in Information Quality degree is offered through the Department of Information Science and is designed to prepare students for careers in industry and government as well as advanced graduate studies. The curriculum is designed to balance information quality theory with industry best practices using state-of-the-art tools and technology. The curriculum is based on the Model Curriculum and Guidelines for Graduate Degree Programs in Information Systems endorsed by the Association for Computing Machinery (ACM) and Association for Information Systems (AIS). The course content has been developed with the support of the Massachusetts Institute of Technology Information Quality Program, based at the MIT Center for Technology, Policy, and Industrial Development, and with additional help from leading practitioners and researchers within the information quality community. The program is accessible to both day and evening students and both full-time and part-time students. In addition, a distance education option allows students to participate in the program via live webcasting.

For more information, please visit the program’s website and the LinkedIn Group “UALR Information Quality Graduate Program”, and Facebook page with the same name. The program also sponsors an active student chapter of the International Association for Information and Data Quality (IAIDQ).

Admission Requirements

- Baccalaureate degree in information science, computer science, computer information systems, management, or a related discipline from an accredited institution.
- Cumulative grade point average of at least 3.0 on a 4.0 scale.
- Graduate Record Examination (GRE) general test section or Graduate Management Admission Test (GMAT) scores. For regular admission, applicants should have a minimum GRE Verbal Reasoning score of 142, a minimum GRE Quantitative Reasoning score of 142, (minimum total Score of 290),and the GRE Analytical Writing score of at least 3.0 or a GMAT Score of at least 420. The GRE/GMAT requirement is waived for applicants who have completed the UALR Information Quality graduate certificate program with a GPA of 3.5 or higher.
- Statement of interest
- Resume
- Completion of any remedial course work that may be specified by the department; in particular, all students seeking regular admission to the program are expected to have
completed (with a grade of B or better in each course) undergraduate course work equivalent to the following UALR undergraduate courses:

- IFSC 2300 Object-oriented Software
- IFSC 3320 Database Concepts
- STAT 2350 Introduction to Statistical Methods

Waiver of any or all of these prerequisite courses is at the discretion of the Information Quality Graduate Committee.

Accelerated Program Admission

The Accelerated B.S. to M.S. program is intended for students interested in pursuing graduate studies in Information Quality following completion of an undergraduate degree in Information Science, condensing what would normally be about six years of study into five years. The B.S. in Information Science (IFSC) is 120 credits. The M.S. in Information Quality is 33 credits. Under the Accelerated Program, students are allowed to double count 12 credits of graduate courses so they can complete both their B.S. and desired M.S. program in five years. These 12 credits would satisfy their IFSC undergraduate elective requirements as well as satisfying course requirements in their MSIQ graduate degree. Students are strongly encouraged to apply for the B.S. to M.S. program before the end of their junior year to help ensure that they have the full subsequent year to begin taking appropriate courses for graduate credit, lessening the course load they need to carry in their fifth year. Faculty advisors for undergraduate students will help promote the program and to identify eligible students who show good potential for the program.

- Undergraduate students may apply and be accepted any time after completing 75 hours or more of undergraduate course work. Students must have completed MATH 1451 Calculus I (or acceptable transfer work) with a C or better.
- All applicants must have at least an overall GPA of 3.5. Students who have transferred to our program can participate in the Accelerated B.S. to M.S. program provided their relevant transfer course work (i.e., courses taken at other institutions that are being used to meet our IFSC degree requirements) also meets the 3.5 minimum GPA criteria. The GRE requirement for the M.S. program is waived for students with an overall GPA of 3.5 or higher.
- Students with an overall GPA between 3.2 and 3.5 may be admitted to the Accelerated B.S. to M.S. program provided they take the GRE and demonstrate that they can score in the 50th percentile or higher in the Verbal and Quantitative sections. Applicants with an overall GPA lower than a 3.2 are not eligible to participate in the Accelerated B.S. to M.S. program.

To apply, students must submit the following:

- Completed UALR Graduate School application
- Completed Accelerated B.S. to M.S. program application
- A written statement of career goals and reasons for applying to the Accelerated B.S. to M.S. program
- Two letters of recommendation are required, one of which must be from a university faculty member (letters are to be submitted directly by recommenders).
Applications should be submitted to the Accelerated B.S. to M.S. program coordinator. Submissions should be sent to Dr. Elizabeth Pierce, Information Science Chair, 550 EIT Building, University of Arkansas at Little Rock, 2801 S. University, Little Rock, AR 72204. Applications may be submitted by email to expierce@ualr.edu as a single Word or PDF document.

The application for the Accelerated B.S. to M.S. program must be approved by the Information Quality graduate coordinator and the Graduate School before the student begins graduate course work. Failure to option prior approval negates the ability to "double count" courses.

After Acceptance

- Once accepted into the program, students need to maintain at least a 3.0 overall average in their undergraduate course work and, per UALR Graduate School guidelines, a 3.0 overall average in their graduate course work. If, at the end of his/her baccalaureate degree, an Accelerated B.S. to M.S. student has failed to meet the Graduate School admission requirement of at least a 3.0 overall average in their course work, she/he will be dismissed from the graduate program.
- To ensure that they follow the proper degree plan for completing both degrees, students must meet with the Accelerated B.S. to M.S. program coordinator upon acceptance to the Accelerated B.S. to M.S. program to map out the graduate courses they will take. Students accepted in the Accelerated B.S. to M.S. program will be allowed to enroll in four graduate courses in the MSIQ program and “double count” these courses towards both their Information Science undergraduate degree’s major electives and their MSIQ degree. We particularly encourage students to complete the four courses that make up the Graduate Certificate in Information Quality during their senior year.
- Students may request a break of up to two semesters between the completion of their B.S. and the start of their MSIQ courses per the UALR Graduate Student Leave of Absence Policy (Policy #509.12). However, if a student does not resume their graduate studies after their approved leave time expires, the student will then be released from the Accelerated B.S. to M.S. Program. The student is then welcome to apply to the MSIQ program using the regular admission process and to be advised accordingly.

Program Requirements

There are two curriculum options within the Master of Science in Information Quality degree program, a thesis option and project option.

Thesis Option

Thirty-three (33) credit hours, consisting of 27 hours of course work plus a minimum of six credit hours of INFQ 7198, 7298, 7398, 7498, 7598, or 7698, Thesis. Total thesis credits exceeding the minimum will not be count towards minimum course requirements.

Project Option
Thirty-three (33) credit hours, consisting 27 hours of course work plus of one of the following three sub-options:

1. INFQ 7686 Graduate Project
2. INFQ 7386 Graduate Project (repeated over two semesters)
3. Minimum of three credits of INFQ 7191, 7291, or 7391 Cooperative Education in Information Quality followed by INFQ 7386 Graduate Project.

To be eligible to enroll in thesis, project, or cooperative education courses, a student must first meet the following requirements:

- Have completed at least nine hours of required or elective program course work.
- Be in good standing in the program.
- In the case of the thesis option, successfully defend a thesis proposal to his or her thesis committee.
- In the case of the project option, has secured a faculty advisor, an external project sponsor, and has a project plan approved by the MSIQ program committee.

In addition to the above requirements, a student approved to enroll in thesis hours must continue to enroll in at least three hours of thesis hours each semester (fall, spring, and Summer I) until he or she has successfully defended his or her thesis. Similarly, a student approved to enroll in project hours must continue to enroll in at least three hours of project hours each semester (fall, spring, and Summer I) until he or she has successfully defended his or her project. Exceptions to this policy will be granted only in cases of significant hardship. Exceptions must be requested in writing and approved by the student’s thesis or project advisor and the graduate coordinator.

Core Requirements

All students must take the following seven courses (21 credit hours):

Information Quality Courses

INFQ 7303 Principles of Information Quality
INFQ 7322 Information Quality Theory
INFQ 7342 Information Quality Tools and Industry Landscape
INFQ 7367 Information Quality Policy and Strategy

Information Science Courses

IFSC 5345 Information Visualization
IFSC 7310 Information Systems Analysis
IFSC 7320 Database Systems
Electives

**INFQ Elective**: Any three-hour graduate course with an INFQ prefix such as:
- INFQ 7318 TQM and Statistical Quality Control
- INFQ 7337 Project and Change Management
- INFQ 7348 Entity Resolution and Information Quality
- INFQ 7353 Case Studies for Information Quality Professionals

**Non-INFQ Elective**: Any three-hour graduate course without the INFQ prefix such as:
- IFSC 5325 Data Mining Concepts and Techniques
- IFSC 5330 Database Security
- IFSC 5339 Network Security
- IFSC 5399 Special Topics (Title will vary)
- IFSC 7321 Information Science and Theory
- IFSC 7325 Advanced Data Mining
- IFSC 7330 Information Systems Security
- IFSC 7331 Network Science
- IFSC 7350 Electronic Commerce
- IFSC 7360 Data Protection and Privacy
- IFSC 7399 Special Topics (Title will vary)
- MGMT 7308 Advanced Business Communication
- MGMT 7312 Team Development

Other with approval of Graduate Coordinator

Graduate Certificate in Information Quality

The graduate certificate in Information Quality program consists of 12 graduate credits, which may be completed in the evenings or online. This certificate will provide individuals with a focused collection of coursework in the information quality area. The program is designed for post-baccalaureate students and working professionals who are interested in moving into information quality leadership roles within their organizations or in preparation for entering master's programs. The program is accessible to both day and evening students and both full-time and part-time students. In addition, a distance education option allows students to participate in the program via live webcasting.

Admission Requirements

- A bachelor’s degree from an accredited institution with an overall GPA of at least 3.0 (4.0 scale). Candidates who have a background in computer programming, database concepts, and applied statistics or who have professional experience in any information quality role will be the most prepared to enter and successfully complete the certificate program.
- Completion of any remedial course work that may be specified by the department for the certificate program. Students seeking regular admission to the certificate program are...
expected to have completed (with a grade of B or better in each course) course work or to have professional experience equivalent to the following UALR courses:

- IFSC 2300 Object-oriented Technology
- IFSC 3320 Database Concepts
- STAT 2350 Introduction to Statistical Methods
- The GMAT or GRE exams are not required.

Program Requirements

The graduate certificate in Information Quality consists of 12 hours of course work as follows:

Required Core Courses (Nine hours)

INFQ 7303 Principles of Information Quality
INFQ 7342 Information Quality Tools & Industry Landscape
INFQ 7367 Information Quality Policy and Strategy

Elective Courses (Three hours, Select one course)

INFQ 7318 Total Quality Management & Statistical Quality Control
INFQ 7322 Information Quality Theory
INFQ 7337 Project and Change Management
INFQ 7353 Case Studies for Information Quality Professionals

Additional Requirements

Graduates of the certificate program with a 3.5 GPA can apply to the MSIQ program without a GMAT or GRE requirement, but students are advised that all other admission criteria to the MSIQ program apply, including deficiency work.

Concurrent enrollment in the IQ graduate certificate and the MSIQ program is permitted (i.e., MSIQ students are eligible to receive certificates upon completion of the appropriate subsection of the MSIQ curriculum).

Students in the IQ graduate certificate program must apply to the UALR Graduate School through the online application. The certificate program code is INFQ-GC.

For more information about the graduate certificate in Information Quality, contact the program coordinator.

Substitution of Core Requirements

The Information Quality graduate committee may substitute other graduate-level courses in Information Quality or Information Science for up to six hours of the core requirements if in the Committee’s opinion, an entering student has already completed the same level of work prescribed for that core course or courses through previous academic work or professional
experience. Overall course substitution for previous work is limited to a total of 12 hours.

Graduate Assistantships

A limited number of graduate assistantships are available. Contact the program coordinator for more information.

Distance Education Option

The program offers a distance education option that permits students to participate in classes via a broad-band Internet connection. Students attending class online will be able to see the course materials presented in the on-campus classroom and participate in discussions with the other students on-campus and online. Classes are recorded so that students can replay previous class meetings. The transcript of students completing the program through the distance education option will appear the same as those completing the program on-campus.

Many students in the program may take advantage of the webcasting of classes; the distance education option is primarily for remote students, i.e., students who, because of distance or other circumstances, cannot attend on-campus classes on a regular basis. However, F-1 and J-1 international students must fulfill the physical presence requirement of their visa type as defined by the Course Load requirements for international students previously addressed within the Graduate Catalog.

Notwithstanding, all major examinations must be taken in person. Examinations for local students are administered in the campus classroom by the instructor. Examinations for remote students must be administered by an approved proctor. Because all students must present their final theses or project reports in person to the Information Quality Graduate Committee as a requirement for graduation from the program, remote students must be prepared to make at least one visit to the UALR campus in order to complete their degree requirements.

Graduation Requirements

- Cumulative GPA of at least 3.0 in the approved program of study as outlined above
- Successful completion of one of the program options

Courses in Information Quality

INFQ 7191, 7291, 7391 Cooperative Education in Information Quality

Prerequisites: graduate standing and approval of assignment by the faculty sponsor and the graduate coordinator. Complements and extends the classroom experience by allowing the student to apply the concepts of information quality improvement in the work place. The exact number of hours per week, activities, and responsibilities of the work are dependent on the nature of the work experience and must be specified in written agreements coordinated with the
UALR Office of Cooperative Education between the student, the sponsoring faculty member, and the employer. At a minimum, a written report and 12 hours per week for a three credit hour semester course, eight hours per week for a two credit hour semester course, and four hours per week for a one credit hour semester course with the participating employer are required. The course may be repeated for credit. The course cannot be used for credit toward the requirements for the Master’s in Information Quality degree without the special approval from the MSIQ Graduate Coordinator.

**INFQ 7300 Independent Study**  
Prerequisites: graduate standing and consent of the instructor. Independent study in Information Quality is given under the direction of a faculty member. The different topics for independent study can be, but not limited to: Research and Reading, Information Quality Software Development, Research Project on Information Quality, etc. as long as the topic is not offered in regularly scheduled course offerings. Upon the completion of the course, the student is typically required to submit a written report with content and quality comparable that required for a conference or journal such as the International Conference in Information Quality or the ACM Journal of Data and Information Quality. Written proposal and final product required. No more than three hours may count toward concentration requirements. Additional hours may fulfill cognate requirements. May be repeated once for degree credit.

**INFQ 7303 Principles of Information Quality**  
Prerequisites: IFSC 2300 or equivalent. This course provides a rigorous exploration of information quality concepts, assessment, and problems in organizational information systems, databases and data warehouses. A combination of state of the art literature review and hands-on projects is used to develop knowledge and ability to meet objectives. Three hours lecture. Three credit hours.

**INFQ 7318 Total Quality Management and Statistical Quality Control**  
Prerequisites: STAT 2350 or equivalent. This course provides an understanding of how the concepts and techniques of Total Quality Management may be applied to information products. Topics include continuous improvement strategies, statistical process control, experimental design, capability analysis, quality cost assessments, benchmarking, acceptance testing, and auditing. Three hours lecture. Three credit hours.

**INFQ 7322 Information Quality Theory**  
Prerequisite: INFQ 7303. This course is designed to provide students with the theoretical foundations critical for developing a deep understanding of the state-of-the-art information quality research from the technical, organizational and strategic perspectives. This course will prepare students to work on their thesis, project and conduct research in the field of information quality. More specifically, students will be exposed to concepts, principles, tools and models and techniques that are essential for information quality definitions, measurement, analysis and improvements. Additionally, students will be exposed to most current, cutting-edge research that goes beyond current industry practice in information quality. Three hours lecture. Three credit hours.
INFQ 7337 Project and Change Management
Prerequisites: INFQ 7303. A course on how to manage information quality improvement projects within an organizational context, including the processes related to initiating, planning, executing, controlling, reporting, and closing a project. Additional topics include identifying project champions, working with user teams, training, documentation, project integration, scope, time, cost-benefit studies, risk analysis, and change management. Three hours lecture. Three credit hours

INFQ 7342 Information Quality Tools and Industry Landscape
This course is designed to develop and increase capability and skills that students need to critically understand what IQ software tools, techniques and prototypes are currently used in industry, government and research laboratories. The course will prepare students to make software tool recommendations on corporate data quality programs. Students will conduct a survey of academic literature and industry practices in terms of IQ tools such as data cleansing, profiling, and auditing and will participate in a hands-on workshop on commercial IQ tools from participating vendors in the field. Two hours lecture and three hours lab per week. Three credit hours.

INFQ 7348 Entity Resolution and IQ
Prerequisite: INFQ 7342 or consent of instructor. An examination of the theory and practice of entity resolution (ER), and the relationship between ER and information quality. Topics include the primary activities of ER, the major ER system architectures, methods and techniques for determining reference equivalence, major theoretical models for ER, entity-based data integration, ER case studies, and hand-on ER exercises with commercial and open-source ER tools.

INFQ 7353 Case Studies for Information Quality Professionals
Prerequisites: INFQ 7322 and INFQ 7342. This intensive and interactive course is designed to develop and increase the student’s capability and skills to critically understand what constitutes data quality, how to analyze and solve data quality problems, and how to institutionalize data quality projects in an organization where data quality is not the most critical priority. Three hours lecture. Three credit hours

INFQ 7367 Information Quality Policy and Strategy
Prerequisite: INFQ 7322. This course explores the top management, strategic perspective for aligning competitive strategy, core competencies, and information quality. Topics include the development and implementation of IQ policies and plans to achieve organizational goals; how to define systems that support the operational, administrative, and strategic IQ needs of the organization, its business units, and individual employees; approaches to managing technology and the information systems function in organizations, role of the CIO. Three hours lecture. Three credit hours.

INFQ 7386, 7686 Graduate Project
Prerequisites: graduate standing and consent of the student’s graduate advisor. Students, under
faculty supervision, will conduct directed research on a particular problem or area of information quality and will produce reports and other deliverables appropriate to the project. 7386 may be repeated over two semesters.

**INFQ 7399 Special Topics**
Prerequisites: graduate standing and consent of instructor. The course explores on an experimental or temporary basis advanced topics in information quality not included in the established curriculum. Content, subtitle, organization change each time offered, based on interest.

**INFQ 7198-7698 Thesis**
Prerequisite: consent of thesis advisor. Student’s should have completed at least 15 hours of the program core, or have had substantial professional experience in information quality management.

Courses in Information Science

**IFSC 5199,5299,5399 Special Topics**
Advanced, specialized topics of current interest in information science. May be repeated for no more than 12 hours of credit. One, two, three or four credit hours.

**IFSC 5325 Data Mining Concepts and Techniques**
Prerequisites: IFSC 4325: IFSC 3330 or equivalent or consent of instructor and Graduate status for IFSC 5325. This course provides in-depth, practical coverage of essential data mining topics, including OLAP and data warehousing, data preprocessing, concept descriptions, association rules, classification and predication, and cluster analysis. It addresses advanced topics such as mining object-relational databases, spatial databases, multimedia databases, time-series databases, text databases, the World Wide Web, and applications in several fields. Three hours lecture. Three credit hours.

**IFSC 5330 Database Security**
Prerequisite: IFSC 3330 or equivalent or consent of the instructor. Focus on security issues in databases systems and introduction of how current and future commercial systems may be designed to ensure secrecy and confidentiality. Topics include security models, basic security mechanisms and software, statistical database security, intrusion detection, security models for next generation databases, tested techniques and proven strategies for securing an Oracle environment — from the operating system to the database to the network, and how to implement security using Oracle’s built-in tools. Three hours lecture. Three credit hours.

**IFSC 5339 Network Security**
Prerequisite: MATH 1304 or equivalent and IFSC 3315 or CPSC 4384 or SYEN 3332 or MGMT 4310 or consent of the instructor. This course provides students with a concise and in-depth overview of security issues in current computer networks. It first gives a brief introduction of
cryptographic algorithms and protocols underlying network security applications, including encryption, hash function, public key algorithm, digital signatures, and key exchanges. Then, it focuses on the security issues in current computer networks as well as network security tools and applications, including Kerberos, X.509v3 certificates, PGP, S/MIME, IP security, SSL/TLS, SET, and SNMPv3. The course will cover network intrusion-detection techniques and systems. Three hours lecture. Three credit hours.

IFSC 5345 Information Visualization
Prerequisites: MATH 1451 and IFSC 2300. The design and presentation of information. Use of graphics, animation, sound, visualization software, and hypermedia in helping users understand information. Methods of presenting complex information to enhance comprehension and analysis. Incorporation of visualization techniques into human-computer interfaces. Three hours lecture. Three credit hours.

IFSC 5360 Social Computing
Prerequisite: IFSC 1310 and IFSC 2300, or equivalent, or consent of Instructor. A hands-on course focusing on concepts of the social and information networks, Web as graph, models (such as Power law distribution, scale-free models, preferential attachment models, etc.) that simulate behavioral characteristics of these graphs, basic graph theoretical concepts, characteristics of social media and Web 2.0 or the Social Web (such as blogs, microblogging, social friendship networks, social bookmarking, social news, social media sharing, wikis, etc.), understanding and developing API and mashups, issues and challenges in data crawling and web analytics, network data visualization, exposure to information extraction and retrieval concepts aiming at the highly dynamic and noisy nature of social media, harnessing the collective and web intelligence, and basic concepts of cloud computing. Three lecture hours. Three credit hours.

IFSC 7100, 7200, 7300 Independent Study
Prerequisite: graduate standing and consent of the instructor. Individual study of a topic in information science under the supervision of the instructor. Topics determined in consultation with supervising faculty member. Agreement must be in writing and filed with the department. Student work will be evaluated by the instructor and documented through reports or other written means. Varies between one to three credit hours.

IFSC 7101 Research Methodology
Prerequisite: graduate standing. A one-credit course in a set of three, introducing students to the research methodology of doctoral level research in the Integrated Computing field. Research examples will be drawn from work that exemplifies the interconnecting research opportunities across the Integrated Computing discipline.

IFSC 7102 Research Tools
Prerequisite: graduate standing. A one-credit course in a set of three, introducing students to the research tools of doctoral level research in the Integrated Computing field. Research examples will be drawn from work that exemplifies the interconnecting research opportunities across the Integrated Computing discipline.
IFSC 7103 Research Applications
Prerequisite: SYEN/IFSC/CPSC 7101 and 7102. A one-credit course in a set of three, introducing students to examples of doctoral level research in the Integrated Computing field. Research examples will be drawn from work that exemplifies the interconnecting research opportunities across the Integrated Computing discipline. Students may with the permission of the graduate coordinator concurrently enroll in this course with either SYEN/IFSC/CPSC 7101 or 7102.

IFSC 7186-7686 Graduate Project
Prerequisite: graduate standing and consent of the student’s graduate advisor. Students, under faculty supervision, will conduct an applied investigation on a particular problem or area of Information Science in a practitioner setting that results in a report and other deliverables appropriate to the project. Variable credit of one to six hours.

IFSC 7192 Graduate Seminar
Prerequisites: graduate standing, consent of graduate coordinator. Students, faculty, and invited speakers will present discuss and exchange ideas on research topics of general interest to the graduate programs in the EIT college. One-hour session per week. Course may be repeated for credit. Graded: credit/no credit.

IFSC 7198-7698 Graduate Thesis
Prerequisite: consent of thesis advisor. Scholarly investigation of a selected problem in Information Science culminating in a written, orally defended thesis. Maximum of six hours may be applied to MS. Variable credit of one to six hours.

IFSC 7310 Information Systems Analysis
Methods of problem identification and definition, data collection and measurement, feasibility study methods, work measurement techniques, task analysis, simulation studies, impact analysis, evaluation methods, forms and display design, proposal writing, documentation and programming standards, design strategies, documentation, and evaluation. (3 credits)

IFSC 7320 Database Systems
The course covers two major areas. It first introduces principles and methodologies of database design, and basic techniques for database development. Then it introduces the fundamentals of information architecture and helps students understand how information architecture acts as the supporting structure aligning application design, technology, and business goals.

IFSC 7321 Information Science: Principles and Theory
Prerequisite: graduate Standing. This course surveys the major topics in information science including a discussion of entropy, value strategies, security, extraction, and emission of information. Three credit hours.

IFSC 7325 Advanced Data Mining Applications
Prerequisites: IFSC 4325 or equivalent. This is an advanced course on data mining. The focus will be on new data mining techniques and their applications in health information systems, text
mining and biological data mining. The course will include presentations and discussions of research papers and projects closely related to topics in data mining. The research papers will be selected from the course supplementary materials and consists of recently published topics on data mining and their applications. Three credit hours.

**IFSC 7330 Information Systems Security**
Prerequisite: MATH 2310 or equivalent, and IFSC 3320 or equivalent. This course aims at providing a solid theoretical foundation in Information Systems Security, including both Computer Security and Communications Security. The security issues in information systems as well as techniques for ensuring information systems security will be studied. The course will focus on the study of security policies, models, and mechanisms for secrecy, integrity, and availability. The basic principles of information systems security will be discussed, including basic cryptography and its applications, security in computer networks and distributed systems, access control models and mechanisms for database security, multilevel database security, stenography, Internet security, and control and prevention of viruses and other rogue programs.

**IFSC 7331 Network Science**
Study of network representations of physical, biological, and social phenomena leading to predictive models. This course will focus on the graph-theoretical, statistical and algorithmic foundations of network science. The course is designed for an interdisciplinary graduate audience with an information or computational science or engineering background, or by consent of the instructor. Three hours lecture. Three credit hours.

**IFSC 7350 Electronic Commerce**
Prerequisite: doctoral-level standing by student or consent of instructor. Seminar style course designed for doctoral level student to be able to explore jointly the field of electronic commerce theoretically, conceptually and through applications including electronic markets, strategy, business models, impacts of information and communication technologies, organization and social behavior, as well as selected economic perspectives.

**IFSC 7360 Data Protection and Privacy**
This course considers the current status of data, information and privacy protection policies, laws and technologies. At the core is the variety of issues concerning informational privacy, i.e. the gathering, creating, storing, use and protection of information and data about individuals. Topics include the economics of data and privacy protection vis-a-vis the right of access to information, control, ownership, free flow, accuracy and use of information; commercial uses of personal information such as data mining and other marketing techniques, as well as the roles of government and the private sector in this setting. Newer information technologies, data mining, security measures, genetic tests and biobanks worldwide have raised important issues and questions.

**IFSC 7370 Data Science and Technologies**
Prerequisites: graduate standing and either IFSC 7320 or CPSC 7351 along with working knowledge of Java programming or consent of the instructor. This course provides a survey of the
skills and concepts needed for managing, processing, and analyzing massive amounts of data in real time. Topics covered include data sourcing, storing and sharing, integration, and data mining strategies along with hands-on experience working with sample technologies selected from a complex ecosystem of tools and platforms.

**IFSC 7399 Special Topics**  
Prerequisite: graduate standing and consent of the instructor. The course explores an emerging or advanced, specialized topic of current interest in information science. May be repeated for credit when subject varies. Three credit hours.
Information Science

EIT Building, Room 550501-569-8951

Master of Science in Information Science

Deriving useful insights from data is more challenging than ever thanks to the ever increasing volumes, varieties, and velocities of available data. The Master of Science in Information Science is designed for post-baccalaureate students and working professionals who are interested in helping organizations harness the power of data by moving into advanced data solution developer and data analyst leadership roles.

Admission Requirements

Regular Admission

- Baccalaureate degree from an accredited institution. Candidates with a background in computer programming, database concepts, and applied statistics, or who have professional experience in an information analytics role, will be the most prepared to enter and successfully complete the program.
- Cumulative grade point average of at least 3.0 on a 4.0 scale.
- Graduate Record Examination (GRE) general test section or Graduate Management Admission Test (GMAT) scores. Preferred scores are in the 50th percentile or higher for Verbal Reasoning, 50th percentile or higher for Quantitative Reasoning, and 4.0 or higher for Analytical Writing.
- The GRE/GMAT requirement may be waived if the student’s baccalaureate GPA from an accredited institution is greater than 3.5.
- Completion of any remedial course work that may be specified by the department. Students seeking regular admission to the program are expected to have completed (with a grade of B or better in each course) undergraduate course work equivalent to the following UALR undergraduate courses:
  - IFSC 2300 Object-oriented Software
  - IFSC 3320 Database Concepts
  - STAT 2350 Introduction to Statistical Methods

Conditional Admission

Applicants with a baccalaureate degree who fail to meet one or more of the other requirements for regular admission may be granted conditional admission. For conditionally accepted students, regular admission status would be granted once the student has satisfied the stipulations mentioned in the admission letter.
Accelerated Program Admission

The Accelerated BS to MS Program is intended for students interested in pursuing graduate studies in Information Science following completion of an undergraduate degree in Information Science, condensing what would normally be about six years of study into five years. The BS in Information Science (IFSC) is 120 credits. The MS in Information Science (MSIS) is 33 credits. Under the Accelerated Program, students are allowed to double count 12 credits of graduate courses so they can complete both their BS and desired MS program in 5 years. These 12 credits would satisfy their IFSC undergraduate elective requirements as well as satisfying course requirements in their MSIS graduate degree. Students are strongly encouraged to apply to the Accelerated B.S. to M.S. program before the end of their junior year to help ensure that they have the full subsequent year to begin taking appropriate courses for graduate credit, lessening the course load they will need to carry in their fifth year. Faculty advisors for undergraduate students will help promote the program and to identify eligible students who show good potential for the program.

- Undergraduate students may apply and be accepted any time after completing 75 hours or more of undergraduate course work. Students must have completed MATH 1451 Calculus I (or acceptable transfer work) with a C or better.
- All applicants must have at least an overall GPA of 3.5. Students who have transferred to our program can participate in the Accelerated B.S. to M.S. program provided their relevant transfer course work (i.e. courses taken at other institutions that are being used to meet our IFSC degree requirements) also meets the 3.5 minimum GPA criteria. The GRE requirement for the M.S. program is waived for students with an overall GPA of 3.5 or higher.
- Students with an overall GPA between 3.2 and 3.5 may be admitted to the Accelerated B.S. to M.S. program provided they take the GRE and demonstrate they can score in the 50th percentile or higher in the Verbal and Quantitative sections. Applicants with an overall GPA lower than 3.2 are not eligible to participate in the Accelerated B.S. to M.S. program.

To apply, students must submit the following:

- Completed UALR Graduate School application
- Accelerated B.S. to M.S. Program form
- A written statement of career goals and reasons for applying to the Accelerated B.S. to M.S. program.
- Two letters of recommendation are required, one of which must be from a university faculty member (letters are to be submitted directly by recommenders).

Applications should be submitted to the Accelerated B.S. to M.S. program coordinator. Currently, the coordinator is Dr. Elizabeth Pierce, Information Science Chair, 550 EIT Building, University of Arkansas at Little Rock, AR, 72204. Applications may be submitted by email to expierce@ualr.edu as a single Word or PDF document.

After applying:
• The application for the Accelerated B.S. to M.S. program must be approved by the Information Science Graduate Coordinator and the Graduate School before the student begins graduate coursework. Failure to obtain prior approval negates the ability to “double count” courses.

• Once accepted into the program, students need to maintain at least a 3.0 overall average in their undergraduate course work and, per UALR Graduate School guidelines, a 3.0 overall average in their graduate course work. If, at the end of his/her baccalaureate degree, an Accelerated BS to MS student has failed to meet the Graduate School admission requirement of at least a 0 overall average in their course work, she/he will be dismissed from the graduate program.

• To ensure that they follow the proper degree plan for completing both degrees, students must meet with the Accelerated BS to MS Program Coordinator upon acceptance to the Accelerated BS to MS program to map out the graduate courses they will take. Students accepted in the Accelerated B.S. to M.S. program will be allowed to enroll in four graduate courses in the MSIS program and “double count” these courses towards both their Information Science undergraduate degree’s major electives and their MSIS degree. We particularly encourage students to complete the four courses that make up the Graduate Certificate in Data Science during their senior year.

• Students may request a break of up to two semesters between the completion of their BS and the start of their MSIS courses per the UALR Graduate Student Leave of Absence Policy (Policy #509.12). However, if a student does not resume their graduate studies after their approved leave time expires, the student will then be released from the Accelerated BS to MS Program. The student is then welcome to apply to the MSIS program using the regular admission process and to be advised accordingly.

Program Requirements

The Information Science M.S. degree requires the completion of 33 credit hours, as described below, and either a master’s thesis or project.

Core Courses (12 credits)

IFSC 5346 Information Visualization
IFSC 7320 Database Systems or CPSC 7351 Database Design
IFSC 7360 Data Protection and Privacy
IFSC 7370 Data Science and Technologies

Elective Courses (15 credit hours required), possible choices include:

IFSC 7321 Information Science and Theory (required for students wishing to pursue the Ph.D.)
CPSC 7382 Systems Analysis and Design or IFSC 7310 Information Systems Analysis or CPSC 7311 Software Engineering (required for students wishing to pursue the Ph.D.)
IFSC 5325 Data Mining
IFSC 5330 Database Security
IFSC 5339 Network Security
IFSC 5360 Social Computing
IFSC 7325 Advanced Data Mining
IFSC 7330 Information Systems Security
IFSC 7331 Network Sciences
IFSC 7350 E-Commerce
CPSC 7352 Advanced Database Issues
CPSC 7373 Artificial Intelligence
CPSC 7374 Image Processing
CPSC 7375 Machine Learning
CPSC 7383 Modeling and Simulation
CPSC 7385 Analysis of Algorithms

No more than two course chosen with an INFQ prefix

- INFQ 7303 Principles of Information Quality
- INFQ 7318 Information Quality TQM and SPC
- INFQ 7322 Information Quality Theory
- INFQ 7337 Information Quality Project Management
- INFQ 7342 Information Quality Tools and Landscape
- INFQ 7367 IQ Strategy and Policy
- INFQ 7348 Entity Resolution and IQ

Graduate Special Topics

Additional Program Requirements

Six credits of either Master’s Thesis or Project

- Six credits of Master’s Thesis: students may register with advisor approval in any of the following thesis courses: IFSC 7198, 7298, 7398, 7498, 7598, or 7698 over one or more semesters to complete the required six credits of IQ graduate thesis course work.
- Six credits of Master’s Project: students may elect to complete a graduate project in one semester (IFSC 7686) or to spread the graduate project over two semesters (IFSC 7386 taken twice) to complete the required six credits of IFSC graduate project course work. As a third option, students can also elect to coordinate three credits of cooperative education experience (IFSC 7391) with the graduate project (IFSC 7386 taken once).

Substitution of Core Requirements

The Information Science Graduate Committee may substitute other graduate-level courses for up to six hours of the core requirements if in the Committee’s opinion, an entering student has already completed the same level of work prescribed for that core course or courses through previous academic work or professional experience. Overall course substitution for previous work is limited to a total of 12 hours.
Graduate Assistantships

A limited number of graduate assistantships are available. Contact the program coordinator for more information.

Distance Education Option

The program offers a distance education option that permits students to participate in classes via a broad-band Internet connection. Students attending class online will be able to see the course materials presented in the on-campus classroom and participate in discussions with the other students on-campus and online. Classes are recorded so that students can replay previous class meetings. The transcript of students completing the program through the distance education option will appear the same as those completing the program on-campus. Many students in the program may take advantage of the webcasting of classes; the distance education option is primarily for remote students, i.e., students who, because of distance or other circumstances, cannot attend on-campus classes on a regular basis. However, F-1 and J-1 international students must fulfill the physical presence requirement of their visa type as defined by the Course Load requirements for international students previously addressed within the Graduate Catalog. Notwithstanding, all major examinations must be taken in person. Examinations for local students are administered in the campus classroom by the instructor. Examinations for remote students must be administered by an approved proctor. Because all students must present their final theses or project reports in person to the Information Science Graduate Committee as a requirement for graduation from the program, remote students must be prepared to make at least one visit to the UALR campus in order to complete their degree requirements.

Graduation Requirements

Successful completion of the program of study outlined above with a GPA of at least 3.0.
Doctor of Philosophy in Integrated Computing

The Integrated Computing doctoral program is housed in the Donaghey College of Engineering and Information Technology. Faculty, curriculum, and resources for this program come from three departments: Computer Science, Information Science, and Systems Engineering.

This degree is designed to promote strong multidisciplinary collaborations across several computing disciplines whose bodies of knowledge influence and intertwine with each other. The following emphasis areas are offered:

<table>
<thead>
<tr>
<th>Track</th>
<th>Description</th>
<th>Sponsoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Integrated Computing</td>
<td>The Net Integrated Computing track focuses on the hardware components and software that allow diverse computer systems to interconnect to form the complex and dynamic computing networks necessary to support an organization’s applications and information environment.</td>
<td>Systems Engineering and Computer Science</td>
</tr>
<tr>
<td>Computer Science</td>
<td>The Computer Science track focuses on the application architecture whose integrated software systems support the data and functional needs of the enterprise across diverse computing networks.</td>
<td>Computer Science</td>
</tr>
<tr>
<td>Information Science</td>
<td>The Information Science track focuses on the theory, applications, technologies, and systems that classify, manipulate, store, retrieve, and disseminate information.</td>
<td>Information Science</td>
</tr>
<tr>
<td>Information Quality</td>
<td>The Information Quality track focuses on the theory, principles, models, and techniques for delivering information that is “fit for use”, an increasingly challenging task as organizations struggle with such issues as data architecture, identity resolution, data protection, and privacy.</td>
<td>Information Science</td>
</tr>
</tbody>
</table>
Graduate Assistantships

A limited number of graduate assistantships that support teaching and research opportunities are available to qualified full-time students. Tuition is paid for nine credits, and a stipend is provided for living expenses. Students must pay registration fees, buy textbooks, and purchase any necessary support materials. For more information about graduate assistantships, the online application process, and other financial assistance opportunities, visit the Integrated Computing website. A student supported by a graduate assistantship must be a registered full-time student taking at least nine credit hours during the fall and spring semesters and is prohibited from any other employment.

International Students

International students whose native language is not English and who do not have a degree from a regionally accredited U.S. institution of higher learning must demonstrate proficiency in written English via the Test of English as a Foreign Language (TOEFL). Applicants’ scores must exceed 550 (paper-based test) or 213 (computer-based test) or 79 (internet-based test). Applicants with scores below but close to 550 (213 if computer-based test or 79 internet-based test) may be admitted provisionally upon the recommendation of the Integrated Computing Steering Committee to the dean of Graduate School, and allowed to fulfill the TOEFL requirement as specified in the Graduate School admissions policies.

For applicants whose native language is not English and who are seeking financial support via a teaching assistantship, the student must demonstrate proficiency in spoken English via a score of 80% or higher on the American English Oral Communication Proficiency Test (AEOCPT) or a score of 5.0 or higher on the Test of Spoken English (TSE).

Admission Requirements

Applicants for the Integrated Computing program must meet the requirements of the UALR Graduate School in addition to the following criteria:

- Applicants must possess a bachelor’s degree or higher from a regionally accredited institution. Students whose degree(s) are in an appropriate scientific discipline, such as engineering, mathematics, computer science, or technology area will be the most prepared to enter and successfully complete this program. Students should have an overall undergraduate GPA of at least 3.0 (4.0 scale) for their last 60 credit hours.
- Standardized test scores (the Graduate Record Examinations (GRE)) taken within five years of application. The desired combined quantitative and verbal scores on the GRE is 301 or above (336 scale), with minimum scores of 142 and 144 on the verbal and quantitative sections, respectively. Computer Science, Net Integrated Computing, and Information Science tracks have an additional minimum score requirement of 155 for quantitative
section. In addition, applicants should demonstrate their ability to communicate complex ideas clearly and effectively either through a strong score on the GRE Analytical Writing Component (e.g., 3.5 or above on a 6.0 scale) or through samples of their written work.

- Three letters of recommendation.
- Official college transcripts including grades and curriculum for undergraduate and (if applicable) graduate studies.
- Written statement by the applicant regarding the reasons (e.g. interests, relevant experience, and goals) why he or she should be considered for this Ph.D. program.
- Résumé detailing any professional work experience, published papers, or presentations

**Note:** All application materials must be submitted directly to the UALR Graduate School.

Integrated Computing track areas may vary in their allowances to the admission criteria stated above. The Integrated Computing Steering Committee will evaluate the compatibility between the applicant’s background, research interests, and communication to skills *vis-à-vis* the doctoral program when making admission decisions, and may decline to admit an otherwise qualified application based on a lack of fit with the program.

**Conditional Admission**

Conversely, the Integrated Computing Steering Committee may recommend conditionally admitting for one semester, a promising student who has less than the specified requirements for admission. These students may be required to take prerequisite coursework at the undergraduate level as part of the terms of their conditional admission. The conditional student must fulfill the admission requirements specified by the Integrated Computing Steering Committee by the specified time frame to be admitted fully (e.g., student may be required to maintain a B or higher in their first 12 hours of the program). Such students will be evaluated by the Integrated Computing Steering Committee after one semester and a decision made to: (1) continue conditional status, (2) grant full admission to the doctoral program, or (3) dismiss the student from the doctoral program.

**Program Requirements**

The program requires a minimum of 75 hours beyond the baccalaureate degree. Specific requirements depend on the track area chosen and are detailed in this section. A minimum of 33 credit hours of course-work is required from 5000- and 7000-level courses with a maximum of six credit hours of 5000-level courses that can be used toward this requirement. This 33 credit hours of coursework must include six credit hours of General Core classes, 12 credit hours of Primary Track courses, a minimum of 12 credit of electives, and three credit hours of seminar courses. The student’s plan of study must be developed in conjunction with his/her doctoral advisor and filed with the appropriate track coordinator as well as the Integrated Computing graduate coordinator.

The general core addresses the theoretical and methodological underpinnings common to all
tracks. It is designed to provide the necessary breadth for all students in the program and consists of the following:

- Either a systems analysis/design course (for students in the Information Quality area) or a software engineering course (for students in all other emphasis areas)
- An information science course that joins together information theory, applications, and networks.

Each track core consists of four courses designed to give students the necessary depth in their specific area of concentration. In addition, student select at least three elective courses based on input from their advisor to further enhance their course portfolio. Electives can be selected from core courses of other tracks, non-track CPSC/IFSC/INFQ/SYEN graduate courses, or other graduate courses appropriate to the student’s research interests from the fields of Science, Technology, Engineering, or Mathematics.

A minimum of 42 credit hours in the 9000-level doctoral research/dissertation is required. The research must be substantial and must extend the state of the art in the student’s chosen emphasis area through theoretical development, design or process improvement, or experimental technique. Because the program is interdisciplinary in nature, students are expected to demonstrate scholarship exhibiting depth of competency in at least one of the track areas of the program and an understanding of the critical issues that extend across multiple track areas. If a student receives one C in his/her courses, he/she will be warned in writing that his/her academic performance is unacceptable and that his/her status will be reviewed by the Integrated Computing Steering Committee which will suggest corrective action. A student receiving two Cs or either a D or an F in his/her courses will be dismissed from the program, pending review by the Integrated Computing Steering Committee.

Writing Requirement

An English Writing Proficiency Exam (WPE) will be offered each spring semester by the Integrated Computing Program. This exam assesses the student’s ability to communicate in a written format. Each student must pass this exam to fulfill graduation requirements. A student who does not pass the WPE is required to take the English Writing Proficiency Laboratory (EWPL). The EWPL is offered each spring term. The student must take the EWPL each spring term until they pass.

Seminar Requirement

All PhD students are required to register for the one credit hour Integrated Computing Seminar for three semesters. This credit hour will count toward the overall program’s minimum requirements of 75 credits. The seminar is designed to promote beneficial synergistic, and collaborative relationships between students and faculty across the emphasis areas through the dissemination and discussion of research that cuts across computing and information boundaries.
In addition, students are required to complete Responsible Conduct of Research, an online research ethics course (Citiprogram.org), to gain awareness and understanding of ethical principles and situations in their disciplines.

Transfer of Credit

For students who have completed some graduate work or who have an M.S. in a non-related field, up to 12 graduate hours may be granted to the student for completing equivalent graduate course work from other institutions based upon the applicability of the courses to the student’s educational goals in the Integrated Computing program. Such credit must be exclusive of thesis or other exit project credits, be no more than five years old at the time of transfer, and must have a letter grade of B or greater. Students interested in requesting a credit transfer should discuss the request with their doctoral advisor and appropriate track coordinator.

The request must also be approved by the Integrated Computing graduate coordinator and the dean of the Graduate School before the transfer of credit can be granted. In some cases students may be required to balance their transfer credit with a corresponding increase in research hours. The student’s advisory committee will determine which transferred credit hours will be counted towards the IGCP degree based upon the applicability of the courses selected for dissertation work and student’s educational goals.

Candidacy Exam

The purpose of the candidacy examination is to determine whether the applicant possesses the attributes of a doctoral candidate. Candidacy exams will be held twice a year after the start of fall and spring classes. The candidacy exam is a comprehensive test composed of four topic areas, each of which must be passed.

Four topic areas for each program track are as follows:

Computer Science Track

- Algorithm and Theory
- Operating Systems
- Computer Architecture
- Programming Languages

Net Integrated Computer Track

- Performance Analysis
- Operating Systems
- Network Protocols
- Network Architecture
Information Science Track

- Database Systems
- Data Mining
- Programming Languages
- Network Science

Information Quality Track

- Information Quality Value and Business Impact
- Information Quality Strategy, Policy, and Governance
- Information Quality Assessment, Improvement, and Sustainability
- Information and Information Systems Architecture Quality

The student may attempt the candidacy exam a maximum of two times and must attempt it in consecutive semesters. A student who has not passed all topic areas after the second offering will be dismissed from the program pending review by the faculty who created and graded the failed exam(s) along with input from members of the Integrated Computing Steering Committee.

Students may attempt their exams no sooner than the beginning of the second semester in the program. All students in the program will be required to take their candidacy exams in the four topic areas within one semester after completing all their general core and primary track courses. Students with sufficient background obtained through undergraduate/graduate course work and who demonstrate fundamental knowledge in their track can apply with their advisor’s permission to take the exam earlier.

Extensions may be granted in the event of special circumstances such as a serious medical episode, pregnancy, or military deployment. Upon successful completion of the candidacy exams, the student will be granted candidacy status.

Doctoral Advisory Committee

Each student will choose a faculty member to be his or her mentor through the doctoral program. New students will be advised initially (i.e., their first semester) by the track coordinator of the student’s chosen emphasis area. Through lab rotations and interactions with faculty, most students should have selected a doctoral advisor to guide them through their coursework, preparation for the candidacy exams, and dissertation process by the end of their first two semesters.

The role of the Doctoral Advisory Committee is to advise and help direct a student’s academic and research program. Students should select and meet with their Doctoral Advisory Committee prior to the completion of the third semester. The Doctoral Advisory Committee will be composed of a minimum of five members, including the committee chair, who will be the student’s doctoral advisor. Four of the five members including the chair must be Integrated Computing doctoral
faculty members. The at-large member(s) may be any other UALR graduate faculty or non-UALR faculty with appropriate graduate status. The Integrated Computing Steering Committee must approve the committee constituency after the initial review by the Integrated Computing graduate coordinator.

Dissertation Proposal

Following the completion of the candidacy exams, candidates will write a dissertation proposal for their doctoral advisory committee detailing the intended research and its rationale in National Science Foundation (NSF) format. Students should allow for ample time between the dissertation proposal and the dissertation defense (typically between one to two years depending on the student’s background). The dissertation subject must be a scholarly contribution to a major field of Integrated Computing in the student’s emphasis area, consisting of new important knowledge or a major modification, amplification, or interpretation of existing significant knowledge.

The proposal will be given to the doctoral advisory committee two weeks in advance of meeting with the committee. The student must orally defend the rationale and experimental procedures for the proposal doctoral dissertation. Students are encouraged to present an open seminar on the proposal prior to meeting with the doctoral advisory committee. Students who fail the proposal may be dismissed from the program. Supervisory or examining committee report forms must be filed at the conclusion of the defense with the track coordinator as well as the Integrated Computing graduate coordinator.

Dissertation Defense

In order to complete the requirements for the Ph.D. degree, students must prepare and successfully define a written dissertation in accordance with the format and procedure dictated by the UALR Graduate School. Students will orally defend their completed Ph.D. research to their doctoral advisory committee. The date and location of the defense must be publicized at least two weeks in advance. The first part of this final examination will be open to the public and will consist of an open seminar on the student’s research. This will be followed by a closed examination during which the candidate’s work will be examined by the doctoral advisory committee. This examination will follow the guidelines established by the UALR Graduate School. The examination can be wide-ranging, but it will usually utilize the student’s research as a starting point. At the completion of the examination, the doctoral advisory committee will vote to either pass or fail the student. If two negative votes are received from committee members, it is considered a failure of the exam. Supervisory or examining committee report forms must be filed at the conclusion of the defense with the track coordinator as well as the Integrated Computing graduate coordinator.

Graduation Requirements

Summary of graduation requirements:
- Successful completion of an approved program of study with a minimum GPA of 3.0.
- Successful completion of candidacy examination.
- Successful completion of proposal and oral defense.
- Successful completion of dissertation and oral defense.
- Successful completion of writing, seminar, and ethics requirements.

Additional Program Requirements:

- A maximum of two 5000-level courses may be applied toward the Ph.D. degree. Note: Some tracks incorporate 5000-level required courses so students electing these emphasis areas may be restricted in the number of additional 5000-level electives that they can take.
- Only one independent study course (three credits) can be applied toward the Ph.D. degree.
- Only two special topic courses can be applied toward the Ph.D. degree.
- Students must possess the prerequisites for all core and track courses in their intended area of study.
- Students may be required to take additional courses to gain the necessary prerequisite knowledge.

Required Courses for Integrated Computing Emphases

A list of courses used in the various tracks of the Integrated Computing Doctoral Program along with descriptions is provided on the following pages. Additional elective courses can be found in the “Master of Science in Systems Engineering,” “Master of Science in Computer Science,” and “Master of Science in Information Quality” sections in this catalog. Other courses may be approved in consultation between the student and his or her doctoral advisor.

General Core Course Descriptions

**CPSC 7311 Software Engineering**
Prerequisite: working knowledge of C and C++ programming languages. An overview of the software development paradigm including the software life cycle, prototyping, and object-orientation; reliability, quality assurance, formal methods, and CASE tools. (Three credits)
**Note**: Students enrolled in the Information Quality Track may substitute CPSC 7382 Systems Analysis and Design or IFSC 7310 Information Systems Analysis in place of the CPSC 7311 Software Engineering Course.

**CPSC 7382 Systems Analysis and Design**
Prerequisite: graduate standing. Analysis and design of computer information services to meet the needs of industries and businesses; intended as a real-world practicum via field study, and as a community outreach via the provision of expertise and training. (Three credits)

**IFSC 7310 Information Systems Analysis**
Methods of problem identification and definition, data collection and measurement, feasibility
study methods, work measurement techniques, task analysis, simulation studies, impact analysis, evaluation methods, forms and display design, proposal writing, documentation and programming standards, design strategies, documentation, and evaluation. (Three credits)

**IFSC 7321 Information Science and Theory**
This course provides a rigorous exploration of information theory including entropy, value strategies, security, extraction, and emission of information. (Three credits)

Primary Track Course Descriptions – Net Integrated Computing Emphasis Area

**CPSC 7341 Telecommunication and Networking**
Fundamentals of data communications; topologies and transmission media; protocol architecture; LAN, MAN, and WAN systems; network design issues. (Three credits)

**CPSC 7343 Sensor Networks**
This course aims to develop fundamental understanding of sensor network systems. It covers architectures and communications protocols for sensor networks. Node and network architectures, naming and addressing, time synchronization, localization and positioning, topology control, and content-based networking are all covered. At the completion of the course, students will understand how sensor networks work as intelligent and coordinated systems. (Three credits)

**SYEN 5336 Advances in Communication Network: Essentials of B-ISDN, InteServ, MPLS, DiffServ**

**SYEN 5359 Optical Networking**
Prerequisites SYEN 5355 or consent of instructor. Optical networking fundamentals, basic building blocks, local access and metro networks, SONET, WDM, DWDM, topology optimization, traffic grooming, optical control including GMPLS, wavelength conversion, survivability, restoration. (Three credits)

Primary Track Course Descriptions – Computer Science Emphasis Area

**CPSC 7325 Software Security Assessment**
This course covers the spectrum of software vulnerabilities in both UNIX/Linux and Windows environments. It demonstrates how to audit security in applications of all sizes and functions, including network and Web software using examples of real code drawn from past flaws discovered in high-profile applications. (Three credits)
**CPSC 7331 Computer Architecture or SYEN 5331 Advanced Computer Architecture**
CPSC 7331 is a study of computer architecture fundamentals; the impact of technology on architecture cost and performance; Instruction Set Architecture; design and analysis of the building blocks of computer systems, including data path, control and memory hierarchy; recent architectural developments (3 credits). SYEN 5331 covers introduction to Computer Systems, Instruction-Set architecture, Arithmetic/Logic Unit, Data Path and Control, Memory System Design, I/O Interface, and Advanced Architectures (Three credits).

**CPSC 7341 Telecommunication and Networking**
Fundamentals of data communications; topologies and transmission media, protocol architecture; LAN, MAN, and WAN systems; network design issues. (Three credits)

**CPSC 7385 Analysis of Algorithms**
A study of categories of computer algorithms greedy, divide-and-conquer, recursive, and probabilistic; performance analysis techniques order relations, recurrence relations, generating functions, induction, simulation; storage efficiency issues; complexity theory. (Three credits)

Primary Track Course Descriptions – Information Science Emphasis Area

**CPSC 7351 Database Design or IFSC 7320 Database Systems and Information Architecture**
This course covers design process, objectives, techniques, syntactic and semantic analysis design; entity relationships model, binary and n-ary relationships, minimality of relations, recursive relationships, role-modeling structures, aggregate objects, conversion methods, implementation models, evaluating design, choosing design methodologies (Three credits).

IFSC 7320 covers two major areas. It first introduces principles and methodologies of database design, and basic techniques for database development. Then it introduces the fundamentals of information architecture and helps students understand how information architecture acts as the supporting structure aligning application design, technology, and business goals. (Three credits)

**IFSC 5345 Information Visualization**
The design and presentation of information. Use of graphics, animation, sound, visualization software, and hypermedia in helping users understand information. Methods of presenting complex information to enhance comprehension and analysis. Incorporation of visualization techniques into human-computer interfaces. (Three credit hours)

**IFSC 7360 Data and Information Privacy**
Concepts and methods for creating technologies and related policies with provable guarantees of privacy protection while allowing society to collect and share person-specific information for necessary and worthy purposes. Methods include those related to the identifiability of data, record linkage, data profiling, data fusion, data anonymity, de-identification, policy specification and enforcement and privacy-preserving data mining.
IFSC 7370 Data Science and Technologies
Prerequisites: graduate standing and either IFSC 7320 or CPSC 7351 along with working knowledge of Java programming or consent of the instructor. This course provides a survey of the skills and concepts needed for managing, processing, and analyzing massive amounts of data in real time. Topics covered include data sourcing, storing and sharing, integration, and data mining strategies along with hands-on experience working with sample technologies selected from a complex ecosystem of tools and platforms.

Primary Track Course Descriptions – Information Quality Emphasis Area

CPSC 7351 Database Design or IFSC 7320
Database Systems and Information Architecture CPSC 7351 covers design process, objectives, techniques, syntactic and semantic analysis design; entity relationships model, binary and n-ary relationships, minimality of relations, recursive relationships, role-modeling structures, aggregate objects, conversion methods, implementation models, evaluating design, choosing design methodologies (Three credits).

IFSC 7320 covers two major areas. It first introduces principles and methodologies of database design, and basic techniques for database development. Then it introduces the fundamentals of information architecture and helps students understand how information architecture acts as the supporting structure aligning application design, technology, and business goals. (Three credits)

INFQ 7303 Principles of Information Quality
This course provides a rigorous exploration of information quality concepts, assessment, and problems in organizational information systems, databases and data warehouses. A combination of state of the art literature review and hands-on projects is used to develop knowledge and ability to meet objectives (Three credits).

INFQ 7322 Information Quality Theory
This course is designed to provide students with the theoretical foundations critical for developing a deep understanding of the state-of-the-art information quality research from the technical, organizational and strategic perspectives. This course will prepare students to work on their thesis, project, and conduct research in the field of information quality. More specifically, students will be exposed to concepts, principles, tools, and models, and techniques that are essential for information quality definitions, measurement, analysis, and improvement. Additionally, students will be exposed to the most current, cutting-edge research that goes beyond current industry practice in information quality (Three credits).

INFQ 7367 Information Quality Policy and Strategy
This course explores the top management, strategic perspective for aligning competitive strategy, core competencies, and information quality. Topics include the development and implementation of IQ policies and plans to achieve organizational goals; how to define systems that support the operational, administrative, and strategic IQ needs of the organization, its
business units, and individual employees; approaches to managing technology and the information systems function in organizations, role of the CIO (Three credits)
Applied Psychology

Stabler Hall, Room 602 (501) 569-3171

Master of Applied Psychology

The Master of Applied Psychology (MAP) program offers preparation for careers in industrial/organizational and health psychology. The program may also serve students seeking a master's degree as preparation for doctoral study in an area of experimental psychology (e.g., social, cognitive, or developmental psychology) as well as students who wish to teach at the community college level. More information about the program, the faculty, and student opportunities is available on the website.

Program Tracks

The Master of Applied Psychology is offered in three areas of concentration: (1) industrial/organizational psychology, (2) health psychology, and (3) general experimental psychology.

- The **industrial/organizational track** (41 hours) focuses on the application of psychological methods and theories in business and organizational settings. This track stresses personnel selection, personnel program evaluation, training, and organizational development.
- The **health psychology track** (42 hours) prepares individuals to pursue careers at the master's level in the field of health psychology or behavioral medicine. Health psychology is concerned with providing educational, scientific, and professional contributions of the discipline of psychology to the promotion and maintenance of health, as well as the prevention and treatment of illness and related dysfunction.
- The **experimental psychology track** (42 hours) prepares students who intend to apply to Ph.D. programs in an area of experimental psychology (e.g., social, cognitive, or developmental psychology). It is also intended for those who wish to teach psychology at the community college level.

Admission Requirements

**Regular Admission**

Each fall, we will accept students into the master's program based on space availability and the applicant's ability to meet program admission requirements. To be considered for admission, you must meet the following requirements:

1. Completed a bachelor’s degree from a regionally accredited undergraduate program;
2. Maintained a cumulative grade point average (GPA) or 3.0 in undergraduate degree;
3. Completed at least 3 hours of undergraduate psychology coursework with an understanding of the broad field of psychology;
4. Completed undergraduate course work (at least 6 hours) in statistics and research methods receiving at least a "B" in each of those courses;
5. Received at least the following on the Graduate Record Examination (GRE): 151 GRE-Verbal and 146 GRE-Quantitative Reasoning with at least a 3.5 on the Analytical Writing.
6. Submitted a letter of intent. Applicants must submit a letter of intent describing the field or specialty within psychology for which they are seeking graduate preparation. The letter should also include a description of how the proposed training relates to the applicant’s career goals.
7. Submitted letters of recommendation. Applicants should obtain three letters of
recommendation from college or university faculty familiar with the applicant’s academic work. These letters should be on college or university letterhead and sent directly to the UALR Graduate School.

Conditional Admission

Occasionally, otherwise qualified prospective students might not meet the criteria related to undergraduate coursework or GRE scores. Materials will be reviewed by the program faculty for individual merit. Students may be admitted conditionally with the provision that they take and pass with at least a B up to 6 hours specified by the program coordinator during their first semester (e.g., PSYC 7330 Advanced General Psychology, EDFN 7304 Basic Statistics, etc.). These courses could be considered electives towards the overall Master’s degree requirements. Students admitted on a conditional basis are not eligible for scholarships or other graduate assistance through the department until they are admitted regularly.

Application Procedures

All materials may be mailed to UALR Graduate School, 2801. S. University Ave., Little Rock, AR 72204 or emailed to gradschool@ualr.edu.

Applications for admission to the MAP program are evaluated on a competitive basis by the program faculty and acceptance is conferred to the most qualified applicants. Fulfilling admission prerequisites and requirements is necessary to be considered, but does not guarantee acceptance.

Applications for admission should be received by the UALR Graduate School by March 15 for students anticipating beginning the following fall semester. Applications received after March 15 will be considered as long as space is available.

Financial Aid

A limited number of graduate assistantships are available in the Psychology department. Inquiries for one of these assistantships should be directed to the department at (501) 569-3171. In addition to graduate assistantships, there are several scholarship opportunities available to students. Information on these scholarship opportunities is available from the Office of Admissions and Financial Aid.

Program Requirements

Comprehensive exams are required for both the Industrial/Organizational Psychology and the Health Psychology tracks unless the student chooses to pursue a thesis as an elective. A thesis is required for the Experimental Psychology track. Successful defense of a thesis or successful completion of comprehensive exams is required for graduation with a Master’s of Applied Psychology.

MAP Core – All tracks require the following (11 hours):
PSYC 7455 Research Methods and Design in Psychology
PSYC 7340 Advanced Behavioral Statistics
PSYC 5460 Psychological Tests: Composition and Interpretation

I/O Psychology (Additional 30 hours)
PSYC 5363 Organizational Psychology
PSYC 5310 Counseling Psychology
PSYC 5325 Personnel Psychology
PSYC 7350 Training and Development
PSYC 7380 Human Factors Engineering
PSYC 7361 Social Psychology
PSYC 7371 Professional Issues and Ethics in Psychology
PSYC 7369 Internship
6 hours electives

Health Psychology (Additional 31 hours)

PSYC 5385 Psychology and Public Health
PSYC 5340 Shaping of Human Behavior
PSYC 7370 Health Psychology
PSYC 5300 Drugs and Behavior
PSYC 7385 Introduction to Clinical Methods
PSYC 7361 Social Psychology
PSYC 7480 Cognitive Psychology
PSYC 7369 Internship or PSYC 7398 Practicum in Applied Psychology
6 hours electives

Experimental Psychology (Additional 31 hours)

PSYC 7361 Social Psychology
PSYC 7480 Cognitive Psychology
PSYC 8600 Thesis
18 hours electives (to be selected with program coordinator)

Graduation Requirements

- Successful completion of degree requirements with a GPA of 3.0 or greater
- Sufficient level of mastery, as determined by successful performance on the comprehensive examination administered at the completion of the MAP program; OR successful defense of a master’s thesis
Certificate and Master of Science


The graduate certificate in Systems Engineering program can help students bring together knowledge from traditional engineering fields, creating the “big picture” for accomplishing goals and managing complex structures such as: Computer Networks, Wireless Networks, Power Plants, Airplanes and Spacecraft Systems, Manufacturing Systems, Transportation Systems, and Healthcare Delivery Systems.

Building upon the theme of the Graduate Certificate, the Master of Science in Systems Engineering program provides unique opportunities for the traditional student as well as for the professional engineering community to broaden their knowledge base and acquire state-of-the-art technical skills. The program helps students to integrate multifaceted engineering projects, model complex engineering systems and optimize their performance, and conduct real-life case studies by carrying out electrical, computers, telecommunications, or mechanical engineering projects. The Master of Science in Systems Engineering program prepares engineers for professional practice in today’s complex technical environment, and also, offers cutting-edge knowledge base for innovation and advanced research. To support these goals, both thesis and non-thesis options are available in the program.

Graduate Certificate in Systems Engineering

The graduate certificate in Systems Engineering imparts fundamental knowledge, tools, and techniques that prepare industry professionals and students to work in systems engineering related jobs.

Admission Requirements

The minimum entrance requirement is a bachelor’s degree in engineering, science, technology, or
a related discipline. Because of the professional nature of the certificate, the precise entrance requirements are determined on a case-by-case basis by the Systems Engineering Admissions Committee.

Program Requirements

The graduate certificate consists of 18 credit hours of course work (which amounts to about half of a typical master’s degree requirement). It is ideal for working professionals who wish to upgrade their knowledge and skills in the intricacies of systems engineering. Certificate holders who have finished the program may further pursue a master’s degree in Systems Engineering, building upon the 18 hours already taken in the certificate program. For the certificate, students must take six, three-credit-hour courses, consisting of four Systems Engineering core courses and two electives.

Core Courses (12 hours)

The Systems Engineering (SYEN) core courses are intended to provide the fundamental methods relevant to the design, implementation, and management of engineering systems. They include:

- SYEN 7311 Systems Design and Analysis
- SYEN 7312 Systems Architecture and Design
- SYEN 7313 Systems Management and Evaluation
- SYEN 7314 Multicriteria Decision and Risk Analysis

These four courses address methods and practices involved in the translation of need, deficiency, or market opportunity into a feasible system or product architecture.

Electives (Six hours)

Due to the diversity of students’ educational and professional backgrounds, students are encouraged to choose two upper-level elective courses (5000-level or above) that are compatible with their specific interests. These two technical courses need to be approved in advance by the Graduate Coordinator, and can be chosen from university departments such as: Systems Engineering, Computer Science, Information Science, or other graduate science- or engineering-related programs. Sample upper- and graduate-level Electives are listed below after the master’s program description.

Master of Science in Systems Engineering

The master’s program in Systems Engineering requires 31 credit hours of work that includes graduate course work with an option to carry out either a thesis or a graduate project.

Admission Requirements

In addition to the UALR Graduate School admission requirements, the applicants for the M.S.
program in Systems Engineering must also meet the following criteria:

- **Education**: Applicants must have a bachelor’s degree in engineering, technology, science or related discipline. The applicants must have an overall undergraduate GPA of 3.0 or 3.3 on the last 60 credit hours.
- **Standardized test scores**: Applicants must have a minimum score on the GRE test: a score of 140 on the Verbal Reasoning section, a score of 155 on the Quantitative Reasoning section, and a score of 3.5 in the Analytical Writing section. GRE will be waived if the student’s GPA is 3.5 or higher.
- **English language requirement**: International students must satisfy the Graduate School TOEFL or IELTS tests requirements.

Applicants who do not meet all the admission requirements may be recommended for conditional admission. The conditionally admitted students must fulfill the requirements of the UALR Graduate School and those specified in their letter of admission.

**Program Requirements**

The Master of Science program in Systems Engineering consists of a minimum of 31 credit hours beyond the baccalaureate degree, of which a maximum of six hours can be transferred from a graduate program from another university with the graduate coordinator’s approval. All credit hours earned in the Systems Engineering graduate certificate program are transferable into the master’s program upon admission into the master’s program, provided the GPA from the certificate program is 3.25 or better.

In addition, the students are required to maintain acceptable academic performance; all master’s course work must be completed with a minimum GPA of 3.0. If a student receives one “C” in the course work, the student will be warned that his/her academic performance is unacceptable and that the student will be reviewed by the Systems Engineering faculty, which will suggest corrective action. A student receiving two “C’s” will be dismissed from the program, pending review by the Systems Engineering faculty.

**Master of Science in Systems Engineering Curriculum**

The student’s plan of study must be developed in conjunction with his/her thesis/project major advisor or Graduate Coordinator and filed with the Systems Engineering Graduate Coordinator.

**Program Core**

The program core provides students the strong systems engineering preparation needed for either a successful professional career in one of the emerging engineering fields, or for further enhancing their education in high-quality engineering doctoral programs.

**Systems Engineering Required Core – 12 credit hours**
SYEN 7311 Systems Design and Analysis
SYEN 7312 Systems Architecture and Design
SYEN 7313 Systems Management and Evaluation
SYEN 7314 Multicriteria Decision and Risk Analysis

Systems Engineering Seminar- One credit hour
SYEN 7190 Systems Engineering Seminar (offered on a credit/no-credit basis)

Thesis Option- Six credit hours
SYEN 8100-8600 Systems Engineering Master’s Thesis

Non-Thesis Option- Three credit hours
SYEN 7385 Systems Engineering Graduate Project

Program Electives

Thesis Option – 12 credit hours

Non-Thesis Option- 15 credit hours

In consultation with the Graduate Coordinator or thesis/project major advisor, students may take their elective course credits from any of the following sample courses. The courses are listed by categories only for easy reference. Students should take at least two 7000-level elective courses.

Systems Analysis and Applications
SYEN 5314 Queuing Theory and Systems
SYEN 5322 Modeling Transportation Systems
SYEN 5342 Linear Program and Network Flows
SYEN 7315 Complex Engineered Systems
SYEN 7316 Advanced Systems Simulation
SYEN 7342 Networks and Combinatorial Optimization

Electrical and Computer Engineering
SYEN 5308 Linux Systems Programming
SYEN 5320 Linear State-Space Control Systems
SYEN 5325 Fuzzy Logic in Control and Systems Engineering
SYEN 5329 Robust and Optimal Control Systems
SYEN 5331 Advanced Computer Architecture
SYEN 5332 Applied Operating Systems
SYEN 5334 Software Systems Engineering
SYEN 5335 Mechatronics I
SYEN 5362 Neural Networks and Adaptive Systems
SYEN 5354 Power Systems Analysis
SYEN 5366 Advanced Digital Systems
SYEN 7302 Advanced Electronics for Instrumentation
SYEN 7306 Real-Time Embedded Systems
SYEN 7320 Linear Systems Theory
SYEN 7331 Transducers in Real-Time Control
SYEN 7332 Advanced Operating System Design

Telecommunications, Networking, and Signal Processing

SYEN 5310 Introduction to Signal Processing
SYEN 5336 Advances in Communication Networks
SYEN 5350 Digital Signal Processing
SYEN 5352 Spatial Time Series
SYEN 5353 Advanced Digital Communications
SYEN 5355 Mobile Multimedia Internet
SYEN 5356 RF Techniques and Systems
SYEN 5358 Cellular and Wireless Communications
SYEN 5359 Optical Networking
SYEN 7355 Statistical Signal Processing
SYEN 7357 Advanced Antennas for Wireless Systems

Mechanical Engineering

SYEN 5182 MEMS and Microsystems Laboratory
SYEN 5282 Microelectromechanical Systems (MEMS) and Microsystems
SYEN 5315 Advanced Dynamics I
SYEN 5326 Measurement Techniques
SYEN 5327 Acoustics I
SYEN 5335 Mechatronics I
SYEN 5340 Applied Numerical Methods
SYEN 5371 Advanced Continuum Mechanics
SYEN 5372 Mechatronics II
SYEN 5375 Mechanical Vibrations
SYEN 5381 Thermal and Fluid Systems
SYEN 5383 Finite Element Analysis
SYEN 5384 Computer Methods in Fluid and Heat Transfer
SYEN 7307 Smart Materials
SYEN 7317 Nanostructural Materials: Physical and Chemical Properties
SYEN 7318 Micro- and Nano-Fabrication
SYEN 7374 Elasticity
SYEN 7376 Fracture Mechanics

Miscellaneous
SYEN 5300, 7300 Independent Study
SYEN 5389 Professional Engineering Licensure
SYEN 5399 Special Topics* in Systems Engineering
SYEN 7101 Research Methodology
SYEN 7102 Research Tools
SYEN 7103 Research Applications
SYEN 7118 Research Ethics in Science and Engineering
SYEN 7385 Systems Engineering Graduate Project
SYEN 7399 Special Topics* in Systems Engineering
SYEN 8100-8600 Systems Engineering Master’s Thesis

* Based on demand, special topics under SYEN 5399 and SYEN 7399 may include:
  Optimization of Communication Networks
  Design and Analysis of Advanced Manufacturing Systems
  Economic Evaluation of Engineering Projects
  Renewable Energy Smart Grid
  Essentials of Coding Theory
  Human Movement Biomechanics and Motor Control

Master’s Thesis/Project Advisor
A student admitted to the master’s program should declare an advisor before he/she enrolls in master’s thesis or graduate project courses.

Master’s Thesis/Project Committee
The Master’s Thesis Committee or Master’s Project Committee can be constituted once the student has declared his/her Master’s Thesis/Project Advisor. The committee will include a minimum of three members and a maximum of four members. At least two members have to be Systems Engineering faculty.

Thesis/Project Proposal Defense
Students choosing the thesis option must present their research proposal to their Master’s Thesis Committee one semester prior to their final thesis defense. Students choosing the non-thesis option must present their project proposal to their Master’s Project Committee before their final project defense. At the completion of tile examination, the Master's Thesis or Project Committee will vote to either pass or fail the student. Students who fail the proposal defense will have to repeat the defense. If the student fails the proposal defense for a second time, he/she will be dismissed from the program, pending review by the Systems Engineering Faculty.

Thesis/Project Defense
Students choosing the thesis option will prepare and successfully define a written thesis in
accordance with the format and procedures dictated by the Graduate School. Students choosing the non-thesis option will prepare a final project report according to the requirements defined by their Master’s Project Committee. Students must orally defend their completed thesis research or project work to their Master’s Thesis or Project Committee. At the completion of the examination, the Master’s Thesis or Project Committee will vote to either pass or fail the student. If two or more negative votes are cast by the committee members, the student is considered to have failed the exam and will be dismissed from the program, pending review by the Systems Engineering Faculty.

Graduation Requirements

- Pass thesis proposal defense / project proposal defense.
- Pass thesis final defense / project final defense.

Courses in Systems Engineering

**SYEN 5182 MEMS and Microsystems Laboratory**
Prerequisites: SYEN 4376 and 4176, or consent of instructor. This laboratory course is an introduction to the principles of micro-fabrication for microelectronic devices, sensors, and micromechanical structures, MEMS, and microsystems with applications in engineering. Course comprises of laboratory work and accompanying lectures that cover silicon oxidation, photolithography, thin film deposition, etching, electrochemical deposition (plating) and packaging. Some selected topic in yield and reliability, as well as process simulation may be covered. Two hours lab. One credit hour.

**SYEN 5199, 5299, 5399, 5499 Special Topics**
Prerequisite: consent of the instructor. Advanced specialized topics of current interest in systems engineering. Topics vary with faculty interest and availability. One, two, three, or four hours lecture. One, two, three, or four hours.

**SYEN 5282 Microelectromechanical Systems (MEMS) and Microsystems**
Prerequisite: SYEN 3372 or equivalent and corequisite concurrent 5182 or equivalent with a grade of C or better. In this introductory MEMS class, we cover the fundamental basis of microsystems technology. Microelectromechanical devices (MEMS), such as actuators, pressure sensors, and opto-mechanical assemblies, require knowledge of a broad range of disciplines, from microfabrication and mechanics to chemistry and solid state device physics. Three hours lecture. Note: Students enrolled in SYEN 5282 do a project related to course contents. SYEN 5282 is not open to students with credit for SYEN 4282. Two credit hours.

**SYEN 5300 Independent Study**
Prerequisite: graduate standing, and consent of the instructor. Individual investigation on entry level topics by a graduate student. Topics determined in consultation with supervising faculty. Agreement must be in writing and filed with the department chairperson. The student work will
be evaluated through reports or other means and documented by the faculty. A maximum of six credit hours of independent study courses, SYEN 5300 and/or SYEN 7300, can be applied toward the degree requirements. Three credit hours.

**SYEN 5308 Linux Systems Programming**
Prerequisite: CPSC 2376 or equivalent. This course introduces the fundamental structure and services of the Unix/Linux operating systems. Upon completion of this course, the students should master application software and middle-ware design in Unix/Linux operating system through programming at the system call level. It covers files and directories, device control, terminal handling, process and threads, inter-process communication, event-driven and signal handling, pipes, sockets, client/server. It also covers graphics and user interface design. Students who have taken SYEN 4308 for credit cannot take SYEN 5308 for credit. Three credit hours.

**SYEN 5310 Introduction to Signal Processing**
Prerequisite: MATH 3322 or equivalent. Introduction to the fundamental concepts in signal processing. Use of the fundamental transform techniques (Laplace transform, discrete Fourier transform, z-transform). Discrete time representation of signal, linear time invariant subsystems. Correlation, coherence and time delays, Standard system models (ARMA, ARMAC). FIR and IIR filters. Three hours lecture. Three credit hours.

**SYEN 5314 Queuing Theory and Systems**
Prerequisite(s): SYEN 3314 or equivalent. The theoretical foundations, models and techniques of queuing theory are presented. Topics include classic models of queues including simple and advanced Markovian queuing models, and models of queues with general arrival and service patterns. Applications of queuing theory and queuing systems design considerations. Three hours lecture. Three credit hours.

**SYEN 5315 Advanced Dynamics I**

**SYEN 5320 Linear Systems Theory**
Prerequisites: SYEN 3364 or consent of instructor. Introduction to modem control systems, state-space models of linear time-invariant systems, solution to state equations, linear transformations and canonical forms, stability analysis, controller synthesis via state feedback, tracking system design, observer-based compensator design, optimal control problems. Three hours lecture. Three credit hours.

**SYEN 5322 Modeling Transportation Systems**
Prerequisite(s): SYEN 3312, SYEN 3314, or Consent of Instructor. The objectives of transportation analysis are defined to include mobility provision, consequence identification and selection of courses of action. A set of methodologies have evolved to exclusively address
transport modeling, including demand forecasting, technology representation, network-flow, and multi-attribute assessment of performance. This course reviews very powerful tools to analyze such a class of technological and socioeconomic problems, characterized by the explicit recognition of a spatial dimension. Three hours lecture. Three credit hours.

**SYEN 5325 Fuzzy Logic Systems**
Prerequisite(s): SYEN 3364. Introduction, basic concepts of fuzzy logic, fuzzy sets, fuzzy relations, Fuzzy If-Then rules, fuzzy implications and approximate reasoning, fuzzy logic in control theory, hierarchical intelligent control, fuzzy logic applications in information systems, fuzzy model identification, neuro-fuzzy systems and genetic algorithms. Three hours lecture. Three credit hours.

**SYEN 5326 Measurement Techniques**
Prerequisite: SYEN 2315 or equivalent. Principles of operation and implementation of transducers used in electronic measuring systems. Sensors used for the measurement of strength, capacitance, pressure, flow, force velocity, temperature, humidity, vibration, sound, and acceleration are discussed. Interfacing transducers with a digital system will be emphasized. Effects of quantization, scaling, sampling time, and bandwidth will be examined. Two hours lecture and two hours laboratory work. Three credit hours.

**SYEN 5327 Acoustics I**
Prerequisite: MATH 2353 or equivalent. Development of the equations for acoustics and vibrations. Transducers for measurement of sound and acceleration. Design of sonic actuators using network analysis. Analog and digital processing of signals, including spectral analysis, adaptive signal processing, and central analysis. Applications to noise analysis and control and machinery diagnosis through sound.

**SYEN 5329 Robust and Optimal Control**
Prerequisite(s): SYEN 3364, MATH 3312. Linear discrete- and continuous-time systems, state equations, transition matrix, internal stability, Lyapunov stability, controllability, observability, realization, linear feedback, state observation, polynomial fraction description, geometric theory, discrete-time stability, reachability, observability, realization, state feedback and observation. Three hours lecture. Three credit hours.

**SYEN 5331 Advanced Computer Architecture**
Prerequisites: SYEN 3336 or consent of instructor. Introduction to Computer Systems, Instruction-Set architecture, Arithmetic/Logic Unit, Data Path and Control, Memory System Design, I/O Interface, and Advanced Architectures. Three hours lecture. Three credit hours.

**SYEN 5332 Applied Operating Systems**
The graduate students will use the C language to implement several generic OS components, practice the process management, and practice the shared memory utilities. Three hours lecture. Three credit hours.

**SYEN 5334 Software Systems Engineering**
Prerequisite: SYEN 3362, Engineering approach to the development of software systems, including the life cycle steps of project planning, requirements analysis and specification, design, production, testing, and maintenance of software systems. Students are required to do a project related to course contents, Dual-listed in UALR Undergraduate catalog as SYEN 4334. Not open to students with credit for SYEN 4334. Three hours lecture. Three credit hours.

**SYEN 5335 Mechatronics I**
Prerequisite: MATH 2453 or equivalent, PHYS 2321 or equivalent. This course covers basic mechanical design elements, including gears, fasteners, bearings, sprockets and chains, timing pulleys, brakes and clutches. Methods of attaching power and timing elements to shafts, including standard keys, Woodruff keys, splines, pins, and press-fits, is covered. Integration of sensors, including potentiometers, limit switches, and yaw rate sensors is covered. Theories of failure will be introduced, and basic stress/strain calculations will be done. Design theories and project management will be introduced. Three hours lecture. Three credit hours.

**SYEN 5336 Advances in Communication Networks**

**SYEN 5340 Applied Numerical Methods**
Prerequisite: SYEN 1305; MATH 3312 and 3322. Scientific computing, error analysis, roots of equations, systems of equations, curve fitting, numerical differentiation and integration, ordinary and partial differential equations. Three hours lecture. Three credit hours. Students are required to do a term project related to the contents of the course. Dual-listed in UALR undergraduate catalog as SYEN 4340. Course not open to students with credit for SYEN 4340.

**SYEN 5342 Linear Programming and Network Flows**
Prerequisites: SYEN 3312, or consent of instructor. This course covers salient linear optimization topics, including computational issues such as decomposition, LU factorization, and network flow. Of equal interest is the equivalence between algebraic and graph-theoretic representation of a model and its solution algorithms. The relationship between the network flow paradigm and discrete optimization is also emphasized. Last but not least are the software libraries to solve linear optimization models. Three hours lecture. Three credit hours.

**SYEN 5350 Digital Signal Processing**
Prerequisite(s): SYEN 3350 or consent of the instructor. Signals and signal processing; discrete-
time signals and systems in the time and frequency domains; digital processing of continuous-
time signals; finite-length discrete transforms; discrete-time signals and systems in the z-
domain; LTI discrete-time systems in the transform domain; digital filter structures; IIR digital
filter design; FIR digital filter design; DSP algorithm implementation; analysis of finite word-
length effects; multi-rate DSP fundamentals; multi-rate filter banks and wavelets; applications of
DSP. Three hours lecture. Three credit hours.

SYEN 5352 Spatial Time Series
Prerequisite(s): SYEN 3312 or equivalent, STAT 3353 or equivalent, or Consent of Instructor.
Instead of a single stream of data, multiple streams gathered over the target can provide better
information. Because of the inherent spatial correlation among these data streams, spatial time-
series can play an important role in multiple-sensor and other data-intensive applications. Image-
processing applications include image rectification and restoration, image enhancement, image
classification, and data merging. Signal processing applications include the Spatial-temporal
Autoregressive Moving-Average model and Intervention Analysis. Unifying these diverse analyses
and applications is Markov Random Field Theory. Three hours lecture. Three credit hours.

SYEN 5353 Advanced Digital Communications
Prerequisites: SYEN 3354 or consent of the instructor. This course provides an in-depth
examination of wireless digital communication design strategies. Topics covered include digital
modulation, radio wave propagation characteristics, signal detection methods, BER performance
improvement and simulation techniques, RF/hardware architectures, migration path for
modulation and demodulation techniques, signal processing building blocks for wireless systems,
methods for mitigating wireless channel impairments, perform system simulations, BER and
channel models, predict system performance and evaluate tradeoffs, list TDMA and CDMA
techniques, and 3G evolution, describe design issues for wireless systems, particularly those
issues in which transmit and receive implementation affect system performance. Three hours
lecture. Three credit hours.

SYEN 5354 Power Systems Analysis
Prerequisites: SYEN 3358, or consent of the instructor. Fundamental concepts of power system
analysis, transmission line parameters, system models, steady-state performance, network
calculations, power flow solutions, fault studies, symmetrical components, operation and control.
Three hours lecture. Three credit hours.

SYEN 5355 Mobile Multimedia Internet
Prerequisites: SYEN 3314, or consent of the instructor. The course will provide state-of-the-art
perspective of the emerging landscape of Mobile Multimedia Internet. Key subject areas covered
in advanced mobile Internet technologies include WLAN, GPRS, 3G, UTMS, and VoIP. Topics
covered will involve architecture of the systems, protocol issues, the design and analysis of
solutions for mobility, quality of service, mobile IP, and standardization efforts. Dual-listed in the
UALR Graduate Catalog as SYEN 5355. Three hours lecture. Three credit hours. Students with
credit for SYEN 4355 may not take SYEN 5355
**SYEN 5356 Radio Frequency Techniques and Systems**

**SYEN 5358 Cellular and Wireless Communications**
Prerequisite: SYEN 3354. Characteristics of mobile radio environment, multipath and fading, cellular communication concepts, channel allocation and reuse, access and scheduling techniques, system capacity, power control, diversity, coding, modulation in cellular systems, examples of digital wireless systems, wireless local area networks. Three hours lecture. Three credit hours.

**SYEN 5359 Optical Networking**
Prerequisites: SYEN 4355, or consent of the instructor. Fundamental concepts of networking, optical networks elements and devices, SONET, WDM, DWDM, optical control plane, MPLS and GMPLS, Free Space Optical Mesh Networks. Three hours lecture. Three credit hours.

**SYEN 5362 Neural Networks and Adaptive Systems**
Prerequisite(s): SYEN 3312, or consent of the instructor. Introduction to neural networks, neuron models and learning strategies, pattern recognition, multi-layer perceptron, back propagation, principle component analysis, self-organizing feature maps, neural networks for time-series forecasting. Three hours lecture. Three hours lecture. Three credit hours.

**SYEN 5366 Advanced Digital Systems**
Prerequisite(s): SYEN 3330 and SYEN 3310. Advanced design principles for digital systems. In particular, the students will be exposed to hardware modeling in the hardware description language: VHDL (Verilog Hardware Description language), Compilation techniques for hardware models, and logic-level synthesis and optimization techniques for combinational and sequential circuits.

**SYEN 5371 Intro Continuum Mechanics**
Prerequisite: MATH 2453 and MATH 3322 or their equivalent, PHYS 231 and PHYS 3300 or their equivalent. This introductory course on Continuum Mechanics will take a unified approach to train the student in the modeling of deformation in solids, fluid flow, and electrical fields. Using a first principles approach, the fundamental conservation laws of mass, charge, momentum and energy will be covered. Application to deformation in solids, heat transfer, fluid flow and electrical fields will be addressed.

**SYEN 5372 Mechatronics II**
Prerequisite: SYEN 4335 or equivalent. The combination of classical mechanical design, electronic
analysis and design, control engineering, and computer science in the design of complex electric-mechanical-controlled systems. Commonly used sensors (encoders, potentiometers, accelerometers) and actuators (stepping motors, DC motors) are studied. Interfacing sensors and actuators to a microcomputer, discrete controller design, and real-time programming for control using the C programming language. There is a significant out-of-class project exercise associated with this course. Three hours lecture. Three credit hours.

**SYEN 5375 Mechanical Vibrations**
Prerequisites: SYEN 3370, or consent of the instructor. Analysis of linear multi-degree of freedom systems. Lagrangian formulation, model analysis, lumped parameter analysis of discrete systems, and continuous system vibrations. Introduction to non-linear systems. Three hours lecture. Three credit hours.

**SYEN 5381 Thermal and Fluid System Design**
Prerequisite: SYEN 4379 or consent of the instructor. Overview of fossil fuel, nuclear and renewable-energy power plants, the Rankine cycle, fossil fuel steam generators, fuels and combustion, pumps and turbines, the condensate-feed-water system, the circulating-water system, gas turbine and combined cycles, principles of nuclear energy, nuclear reactors and power plants, geothermal energy, solar energy, wind energy, energy from the oceans, energy storage and fuel cells, environmental aspects of power generation. Three hours lecture. Three credit hours.

**SYEN 5383 Finite Element Analysis**
Prerequisite: SYEN 3378, 4376, and 4340 (recommended). Basic concepts of the finite element method (FEM); stiffness matrices, spring and bar elements; truss structures, the direct stiffness method; flexure elements; method of weighted residuals; interpolation functions for general element formulation; applications in heat transfer, fluid mechanics, and solid mechanics; structural dynamics. dual-listed in the Undergraduate Catalog with SYEN 5383, Three hours lecture. Three credit hours.

**SYEN 5384 Computer Methods in Fluids and Heat Transfer**
Prerequisite: SYEN 4374 or equivalent. Modeling and simulation of thermal-fluid problems using commercial software, finite volume method, solution algorithms for pressure-velocity coupling, solution of systems of discretized equations, unsteady flows, uncertainty in CFD modeling, methods for dealing with complex geometries, modeling of combustion, heat transfer, and unsteady flows. Three hours lecture. Three credit hours.

**SYEN 5389 Professional Engineering Licensure**
Prerequisite concurrent: registration for the Fundamentals of Engineering exam, or consent of instructor. Legal, regulatory, and ethical issues related to the practice of engineering; preparation for engineering licensure examinations. Two hours lecture. Three hours lab. Three credit hours. Cross listed as CNMG 5389. Dual-listed in the *UALR Undergraduate Catalog* as CNMG 4389. Students cannot receive graduate credit for SYEN 5389 if they have previously taken SYEN 4389.
**SYEN 7101 Research Methodology**
Prerequisite: graduate standing. A one-credit course in a set of three, introducing students to the research methodology of doctoral level research. Research examples will be drawn from work that exemplifies the interconnecting research opportunities across the computing and engineering disciplines.

**SYEN 7102 Research Tools**
Prerequisite: graduate standing. A one-credit course in a set of three, introducing students to the research tools of doctoral level research. Research examples will be drawn from work that exemplifies the interconnecting research opportunities across the computing and engineering disciplines.

**SYEN 7103 Research Applications**
Prerequisite: graduate standing. A one-credit course in a set of three, introducing students to examples of doctoral level research. Research examples will be drawn from work that exemplifies the interconnecting research opportunities across the computing and engineering disciplines.

**SYEN 7118 Research Ethics in Science and Engineering**
The course uses a case-based method to cover various topics related to professional research ethics. It is intended for entering science and engineering graduate students in the Donaghey College of Engineering and Information Technology (DCEIT). The purpose of the course is to familiarize students with professional ethics related to research and to prepare them to deal with typical ethical situations that may occur in the course of their graduate studies and professional careers.

**SYEN 7145 Integrated Comp. Lab Rotation**
First semester orientation course to allow new students in the Integrated Computing doctoral program to gain exposure in several different faculty research areas. This course will aid the student in the selection of his/her doctoral research advisor. 1 credit hour. Offered on demand. Cross listed between Computer Science, Systems Engineering, and Information Science.

**SYEN 7190 Systems Engineering Seminar**
Prerequisites: graduate standing and consent of the graduate advisor. Students, faculty, and invited speakers will present, discuss and exchange ideas on research topics related to Systems Engineering. One-hour session per week. Course may be repeated for credit. Graded: credit/ no credit.

**SYEN 7192 Graduate Seminar**
Prerequisites: graduate standing, consent of graduate coordinator. Students, faculty, and invited speakers will present discuss and exchange ideas on research topics of general interest to the graduate programs in the EIT college. One-hour session per week. Course may be repeated for credit. Graded: credit/no credit.

**SYEN 7300 Independent Study**
Prerequisite: completion of core course requirements in the graduate program, and consent of the instructor. Individual research investigation by a graduate student. Topics determined in consultation with supervising faculty. Agreement must be in writing and filed with the department chairperson. The student work will be evaluated through reports or other means and documented by the faculty. A maximum of six credit hours of independent study courses, SYEN 5300 and/or SYEN 7300, can be applied toward the degree requirements. Three credit hours.

**SYEN 7302 Advanced Electronics for Instrumentation**
Principles of operation of analog and digital integrated circuitry, including amplifiers, A/D and D/A circuits, active filters and special function circuits as used in computers and instrumentation for measurement and control.

**SYEN 7306 Real-time Embedded Systems**
This course presents technologies for the design and implementation of embedded systems using Linux Operating System (OS). Such technologies include Linux, real-time Linux OS, and real-time embedded application design. Students will learn how to administer Linux OS and how to create a task-specific kernel for their own embedded application. They will learn techniques necessary for developing real-time Linux device drivers. real-time kernel space programming, and inter-process communication between real-time kernel and user space. Students will obtain hands-on experience with embedded software design through course projects. Upon completing this course, students should be able to develop their own embedded applications based on open source software resources.

**SYEN 7307 Smart Materials**
Prerequisite: SYEN 4371 or equivalent. This course will deal with the unique nonlinear, hysteretic response of smart materials that arise due to coupling between mechanical and thermal or electric or magnetic fields. Specifically, microstructural characteristics and constitutive modeling of shape memory alloys, ferroelectric materials and ferromagnetic materials will be covered. Use of these smart materials in sensor and actuator design will be addressed.

**SYEN 7310 Economic Evaluation of Engineering Projects**
Prerequisite(s): Math 1453, SYEN 3312 and 3314 or their equivalents, or consent of the instructor. Application of engineering management decision making to the life-cycle economic evaluation of engineering projects. Topics include decisions regarding investment in new or existing facilities and improvement of processes in both manufacturing and service industries. Deterministic, stochastic and multi-attribute evaluation approaches with the objectives of profit and utility maximization, as well as cost and risk reduction techniques are explored. Three hours lecture. Three credit hours.

**SYEN 7311 System Design and Analysis**
Prerequisite(s): graduate standing or consent of the instructor. This course introduces the concept of a system, system requirements, system life cycle, design and integration. The basic principles of system engineering design process, modeling, and process modeling. Basic concepts of system requirements and definition of the design problem will be presented. The details of
functional, physical, and operational architectures will be presented. The details of interface
design, integration, and qualification of the system will be presented. Three hours lecture. Three
credit hours

SYEN 7312 Systems Architecture and Design
Prerequisites: SYEN 7311 or consent of the instructor. This course introduces the process of
systems architecting and the design for operational feasibility in the context of systems
engineering design process. Systems architecture topics include the functional, physical,
operational, and interface architectures and their correlation with the system design process, as
well as graphical modeling techniques to develop these types of architectures. Examples of
standardized architecture frameworks used in practice are also presented. The design for
operational feasibility includes quantitative and qualitative aspects in reliability, maintainability,
productibility, supportability, disposability and affordability as they relate to the system
engineering life-cycle design process. Three hours lecture. Three credit hours.

SYEN 7313 Systems Management and Evaluation
Prerequisite: graduate standing and consent of the instructor. Organized in two parts, this course
presents the fundamental concepts of systems management and evaluation. Systems
management methodologies, such as Systems Engineering Management Plan, Work Breakdown
Structure and Risk Management Plan are presented in the first part of the course. As the design
and development of any engineering system is basically an engineering project, the second part
of the course introduces the steps in the engineering project management process, Quantitative
project management techniques, such as Program Evaluation and Review Technique, and Critical
Path Method are presented in detail. Three hours lecture. Three credit hours.

SYEN 7314 Multi-criteria Decision and Risk Analysis
Prerequisite: SYEN 7313 or equivalent, or consent of the instructor. The purpose of this course is
to expose the student to a wide variety of techniques in handling Multi-criteria Decision Making
(MCDM) problems. The emphasis will be placed on breadth rather than depth. The students will
analyze an MCDM problem of their choice. S/he will work with the decision-maker(s) to define the
problem (particularly the criteria with which s/he uses to measure ‘success,’) generate
alternatives, capture the preference structure of the decision maker(s), and evaluate the
alternatives, resulting in preferred courses of action. The student will get the opportunity to use
Multi-attribute-decision-analysis and Multi-criteria-optimization computer-software.

SYEN 7315 Complex Engineered Systems
Prerequisite(s): SYEN 3312 and 3362 or their equivalents, or consent of the instructor.
Introduction to complex engineered systems and the methods and tools currently under
consideration in the ongoing research towards better understanding of such systems and the
development of a complex engineered systems theory. Topics include concepts such as
emergence, self-organization, learning and adaptation, and various quantitative and
computational intelligence techniques that are considered for modeling, analysis and evaluation
of such systems. System-of-systems concept is also presented. Three hours lecture. Three credit
hours.
SYEN 7316 Advanced Systems Simulation
Prerequisite(s): SYEN 3312 and 3316 or equivalent, or consent of the instructor. Simulation of existing or proposed real-world systems (facilities and processes). Topics include simulation input modeling, random variant generation and stochastic models of arrival processes, statistical analysis of simulation output, variance reduction techniques, statistical design of simulation experiments and optimization of the simulation output. Monte Carlo simulation on spreadsheets, including project management, risk analysis, and reliability applications. Three hours lecture. Three credit hours.

SYEN 7317 Nanostructural Materials: Physical and Chemical Properties
Prerequisites: SYEN 3372 or PHYS 4340 or CHEM 4340 or equivalent. This course introduces students to the area of nanotechnology and the novel properties of the materials built at the nanoscale. The course will cover the main properties of nanomaterials, various methods for synthesis and characterization and the most up-to-date applications from nanoelectronics, advanced materials, bio-medicine, etc. The course is designed for graduate students with a background in chemistry, physics, and engineering.

SYEN 7318 Micro- and Nano-Fabrication
Prerequisites: consent of instructor. This course will introduce some of the important micro- and nano-fabrication techniques that are mostly used in areas of microelectronics and nanotechnology. Some of the topics that will be covered include diffusion of impurities, thermal oxidation, ion implantation, optical lithography, thin film deposition, etching, nanolithography, nano-imprinting, growth of nanorods and nanosprings by glancing angle deposition, and growth of carbon nanotubes. During the course, students will become familiar with some of the basic experiments including thin film and glancing angle depositions, etching, and film characterization techniques. The course is intended for graduate students from science and engineering majors.

SYEN 7320 Linear Systems Theory
Prerequisites: SYEN 5320 or consent of instructor. This course covers the mathematical basis of linear state-space systems theory. Topics include: linear time-varying and time-invariant system representation, solutions to LTV and LTI systems, stability analysis, controllability and state feedback, observability and output feedback, minimal realizations, MIMO systems, and LQR/LQG optimal control. Three hours lecture. Three credit hours.

SYEN 7331 Transducers and Real Time Control
Prerequisites: SYEN 4335 or equivalent, SYEN 7302, SYEN 1302 or equivalent. Applications of computer techniques for data acquisition, analysis, and real-time control; use of analog-to-digital, digital-to-analog, digital I/O for measurement; C computer language for experiment control; use of standard transduction elements for physical measurements such as position, velocity, acceleration, and force.

SYEN 7332 Advanced Operating Systems Design
Prerequisites: SYEN 5332 or consent of instructor. Design principles of modern schedulers, multi-processor systems, protection and security components, OS tools, and IP stacks. The graduate
student will do several projects through the software engineering cycles of requirement analysis, high level design (HLD), detailed design (DD), implementation, unit testing, and system testing. The projects include but not limited to the Linus scheduler, signal handler, shared memory control, virtual memory management, and case studies of device drivers. Three hours lecture. Three credit hours.

**SYEN 7342 Network and Combinatorial Optimization**
Prerequisites: SYEN 5342 or consent of the instructor. An in-depth study of combinatorial programming and network flow optimization. Emphasis on discrete optimization and specialized solution techniques that are efficient way to solve mixed-integer programming problems. Techniques include minimum cost flow, networks with gain, multi-commodity flow networks, networks with side constraints and Lagrangian relaxation. Computational complexity is also discussed. Three hours lecture. Three credit hours.

**SYEN 7355 Statistical Signal Processing**

**SYEN 7357 Advanced Antennas for Wireless Systems**
Prerequisite: SYEN 3356 or consent of the instructor. The course introduces the fundamental principles of antenna theory and applies them to particular antennas for wireless communications systems and other advanced antenna systems. In addition, the course develops appreciation for research issues of antennas for mobile wireless and advanced communications systems. The course is useful in the areas of mobile communication, signal processing, antenna theory, and smart antennas. It provides the current state of antenna array research and describes how an antenna array may be used to help meet the ever-growing demand of increased channel capacity for wireless mobile communications services. Three hours lecture. Three credit hours.

**SYEN 7374 Elasticity**
Prerequisites: SYEN 4376 or ASCI 5320 or consent of the instructor. Fundamental concepts of stress and strain. Linear theory: boundary value problems of elasticity including plane stress, plane strain, and torsion, elementary variation theory of elasticity. Three hours lecture. Three credit hours.

**SYEN 7376 Fracture Mechanics**
Prerequisites: SYEN 7374, or consent of the instructor. Failure of manufactured products in service and implications for design; energy release rates, toughness, and evaluation of experimental tests; fracture mechanisms in different material systems; fracture toughness testing; damage tolerance; design studies. Three hours lecture. Three credit hours.

**SYEN 7385 Systems Engineering Graduate Project**
Prerequisites: graduate standing and consent of the student’s graduate advisor. Students, under faculty supervision, will conduct directed research on a particular problem or area of Systems Analysis and Applications/Electrical and Computer Engineering/Telecommunication and Signal Processing/ Mechanical Engineering in some depth, and will produce an appropriate project report based on his/her investigations.

**SYEN 7399 Special Topics in Systems Engineering**
Prerequisites: graduate standing and consent of the instructor. Advanced topics in the area of Systems Analysis and Applications/Electrical and Computer Engineering/Telecommunication and Signal Processing/ Mechanical Engineering. Three hours lecture. Three credit hours.

**SYEN 8100-8600 Systems Engineering Master’s Thesis**
Prerequisites: graduate standing and consent of the thesis advisor. Scholarly investigation of a selected problem in the area of Systems Analysis and Applications/Electrical and Computer Engineering/Telecommunication and Signal Processing/Mechanical Engineering culminating in a written, orally defended thesis. Maximum of six hours may be applied toward MS degree. Variable credit of one to six hours.

**SYEN 9100-9900 Doctoral Research/Dissertation**
Prerequisites: consent of advisor. One to nine credit hours to be determined at the time of registration. Cross listed between Computer Science, Systems Engineering, and Information Science.
Graduate Certificate in Technology Innovation

The graduate certificate in Technology Innovation is a distinctive program intended for working professionals and post-baccalaureate students who are interested in the development, evaluation and implementation of original ideas for existing businesses and new enterprises. The curriculum is designed to teach a specific set of skills necessary to effectively innovate new products and services. Students will learn how to: choose problems that are ripe for technological solutions, create numerous ideas for solving these problems, effectively evaluate these ideas so that only the most promising ones go forward, assemble a business plan, persuade influential people to support their proposals and successfully implement their solutions in new or existing businesses. The certificate is a joint program between the Donaghey College of Engineering and Information Technology (EIT) and the College of Business, allowing students to get a broad perspective on developing ground-breaking solutions to complex problems.

Admission Requirements

A bachelor’s degree from an accredited institution of higher education. Candidates who have a background in engineering, science, mathematics, computer science, information science, business or any other areas of technology or who have professional experience in using technology will be the most prepared to enter and successfully complete the certificate program. The GMAT or GRE exam is not required.

Program Requirements

The Graduate Certificate in Technology Innovation requires 18 credit hours for completion.

Required Courses:

TINV 5301 Strategies for Innovation
TINV 5303 Applied Innovation Project
MGMT 5383 Issues in Entrepreneurship
MGMT 7311 Entrepreneurship & Small Enterprise Management

In addition, students must select two graduate courses in their field of interest, as approved by the coordinator.
Graduation Requirements
Cumulative graduate GPA of at least 3.0 on an approved program of study as outlined above.

Courses in Technology Innovation

**TINV 5301 Strategies for Innovation**
Prerequisites: junior or senior standing (TINV 4301) or graduate standing (TINV 5301). This course examines strategies for developing innovative products. Topics include how to choose promising problems that are ripe for innovative solutions, how to generate multiple ideas for solving these problems, how to select the most promising solutions and how to sell your solution to potential partners, managers, and investors. This is a hands-on project-based course.

**TINV 5303 Applied Innovation Project**
Prerequisites: TINV 4301 / 5301, MGMT 4361 / 5361 and MGMT 4383/5383. The purpose of this course is to give students experience in developing a prototype product in their chosen technological field. This course covers the design process for technological inventions and introduces students to commonly used design tools. It is open to students in any field of science and technology. This is primarily a laboratory class that requires a substantial time commitment. In addition to the activities listed above, students enrolled in TINV 5303 will need to prepare a Prototype User Evaluation Report that documents how potential users of the innovation evaluate the prototype.
Professor Lisa Bond-Maupin, Dean  
Associate Professor Andrew Drummond, Interim Associate Dean for Teaching and Interdisciplinary Support  
Professor Sarah Beth Estes, Interim Associate Dean for Research and Community Engagement  

The College of Social Sciences and Communication includes 8 units offering degrees at the baccalaureate, masters, and doctoral levels, including the School of Mass Communication and the departments of Speech Communication, Rhetoric and Writing, Criminal Justice, Psychology, Sociology and Anthropology, Political Science, and the Institute of Government. The college also supports several interdisciplinary research centers and institutes, including University Television, KLRE/KUAR public radio, the Survey Research Center, the Center for Nonprofit Organizations, and the Center for Public Collaboration.

<table>
<thead>
<tr>
<th>Program</th>
<th>Certificate or Degree Program</th>
<th>Department/School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Psychology</td>
<td>Master’s (M.A.)</td>
<td>Psychology</td>
</tr>
<tr>
<td>Applied Communication Studies</td>
<td>Master’s (M.A.)</td>
<td>Speech Communication</td>
</tr>
<tr>
<td>Conflict Mediation</td>
<td>Certificate</td>
<td>Institute of Government</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>Master’s (M.A.)</td>
<td>Criminal Justice</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>Master’s (M.S.)</td>
<td>Criminal Justice (Online)</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>Doctorate (Ph.D.)</td>
<td>Criminal Justice</td>
</tr>
<tr>
<td>Mass Communications</td>
<td>Master’s (M.A.)</td>
<td>Mass Communication</td>
</tr>
<tr>
<td>Non-Profit Management</td>
<td>Certificate</td>
<td>Institute of Government</td>
</tr>
<tr>
<td>Professional &amp; Technical Writing</td>
<td>Master’s (M.A.)</td>
<td>Rhetoric and Writing</td>
</tr>
<tr>
<td>Public Administration</td>
<td>Master’s (M.P.)</td>
<td>Public Administration</td>
</tr>
<tr>
<td>Strategic Communication</td>
<td>Certificate</td>
<td>Mass Communication</td>
</tr>
</tbody>
</table>
Applied Psychology

Master of Applied Psychology

The Master of Applied Psychology (MAP) program offers preparation for careers in industrial/organizational and health psychology. The program may also serve students seeking a master’s degree as preparation for doctoral study in an area of experimental psychology (e.g., social, cognitive, or developmental psychology) as well as students who wish to teach at the community college level. More information about the program, the faculty, and student opportunities is available on the website.

Program Tracks

The Master of Applied Psychology is offered in three areas of concentration: (1) industrial/organizational psychology, (2) health psychology, and (3) general experimental psychology.

- The **industrial/organizational track** (41 hours) focuses on the application of psychological methods and theories in business and organizational settings. This track stresses personnel selection, personnel program evaluation, training, and organizational development.

- The **health psychology track** (42 hours) prepares individuals to pursue careers at the master’s level in the field of health psychology or behavioral medicine. Health psychology is concerned with providing educational, scientific, and professional contributions of the discipline of psychology to the promotion and maintenance of health, as well as the prevention and treatment of illness and related dysfunction.

- The **experimental psychology track** (42 hours) prepares students who intend to apply to Ph.D. programs in an area of experimental psychology (e.g., social, cognitive, or developmental psychology). It is also intended for those who wish to teach psychology at the community college level.

Admission Requirements

**Regular Admission**

Each fall, we will accept students into the master’s program based on space availability and the applicant’s ability to meet program admission requirements. To be considered for admission, you must meet the following requirements:

1. Completed a bachelor’s degree from a regionally accredited undergraduate program;
2. Maintained a cumulative grade point average (GPA) or 3.0 in undergraduate degree;
3. Completed at least 3 hours of undergraduate psychology coursework with an understanding of the broad field of psychology;
4. Completed undergraduate course work (at least 6 hours) in statistics and research methods receiving at least a “B” in each of those courses;
5. Received at least the following on the Graduate Record Examination (GRE): 151 GRE-Verbal and 146 GRE-Quantitative Reasoning with at least a 3.5 on the Analytical Writing.
6. Submitted a letter of intent. Applicants must submit a letter of intent describing the field or specialty within psychology for which they are seeking graduate preparation. The letter should also include a description of how the proposed training relates to the applicant’s career goals.
7. Submitted letters of recommendation. Applicants should obtain three letters of
recommendation from college or university faculty familiar with the applicant’s academic work. These letters should be on college or university letterhead and sent directly to the UALR Graduate School.

**Conditional Admission**

Occasionally, otherwise qualified prospective students might not meet the criteria related to undergraduate coursework or GRE scores. Materials will be reviewed by the program faculty for individual merit. Students may be admitted conditionally with the provision that they take and pass with at least a B up to 6 hours specified by the program coordinator during their first semester (e.g., PSYC 7330 Advanced General Psychology, EDFN 7304 Basic Statistics, etc.). These courses could be considered electives towards the overall Master’s degree requirements. Students admitted on a conditional basis are not eligible for scholarships or other graduate assistance through the department until they are admitted regularly.

**Application Procedures**

All materials may be mailed to UALR Graduate School, 2801. S. University Ave., Little Rock, AR 72204 or emailed to gradschool@ualr.edu.

Applications for admission to the MAP program are evaluated on a competitive basis by the program faculty and acceptance is conferred to the most qualified applicants. Fulfilling admission prerequisites and requirements is necessary to be considered, but does not guarantee acceptance.

Applications for admission should be received by the UALR Graduate School by March 15 for students anticipating beginning the following fall semester. Applications received after March 15 will be considered as long as space is available.

**Financial Aid**

A limited number of graduate assistantships are available in the Psychology department. Inquiries for one of these assistantships should be directed to the department at (501) 569-3171. In addition to graduate assistantships, there are several scholarship opportunities available to students. Information on these scholarship opportunities is available from the Office of Admissions and Financial Aid.

**Program Requirements**

Comprehensive exams are required for both the Industrial/Organizational Psychology and the Health Psychology tracks unless the student chooses to pursue a thesis as an elective. A thesis is required for the Experimental Psychology track. Successful defense of a thesis or successful completion of comprehensive exams is required for graduation with a Master’s of Applied Psychology.

MAP Core – All tracks require the following (11 hours):

- PSYC 7455 Research Methods and Design in Psychology
- PSYC 7340 Advanced Behavioral Statistics
- PSYC 5460 Psychological Tests: Composition and Interpretation

I/O Psychology (Additional 30 hours)

- PSYC 5363 Organizational Psychology
- PSYC 5310 Counseling Psychology
- PSYC 5325 Personnel Psychology
- PSYC 7350 Training and Development
- PSYC 7380 Human Factors Engineering
PSYC 7361 Social Psychology
PSYC 7371 Professional Issues and Ethics in Psychology
PSYC 7369 Internship
6 hours electives

Health Psychology (Additional 31 hours)
PSYC 5385 Psychology and Public Health
PSYC 5340 Shaping of Human Behavior
PSYC 7370 Health Psychology
PSYC 5300 Drugs and Behavior
PSYC 7385 Introduction to Clinical Methods
PSYC 7361 Social Psychology
PSYC 7480 Cognitive Psychology
PSYC 7369 Internship or PSYC 7398 Practicum in Applied Psychology
6 hours electives

Experimental Psychology (Additional 31 hours)
PSYC 7361 Social Psychology
PSYC 7480 Cognitive Psychology
PSYC 8600 Thesis
18 hours electives (to be selected with program coordinator)

Graduation Requirements

- Successful completion of degree requirements with a GPA of 3.0 or greater
- Sufficient level of mastery, as determined by successful performance on the comprehensive examination administered at the completion of the MAP program; OR successful defense of a master’s thesis
Master of Arts in Applied Communication Studies

The mission of the Department of Speech Communication is to foster the co-creation of better social worlds through positive communication. Our Master of Arts in Applied Communication Studies provides graduate students with a solid theoretical and practical understanding of how communication practices operate in everyday life. Students learn to develop positive communicative skills that are necessary to function effectively in all areas of today’s business and professional world.

The objective of the program is to guide students in the application of communication theory to a variety of interpersonal, institutional, public and organizational contexts. For more information, please visit the website.

Our curriculum fosters a strong knowledge base grounded in communication theory and its various applications, such as management, consulting, human resources, training, organization development, relational communication, health care, education, and public relations. An undergraduate background in speech is helpful, but not required.

Tracks

The program is divided into two tracks with classes offered online, in the evenings and in a unique weekend format. These tracks are designed to provide options for students with differing goals. Each track maintains an applied focus on six pillars of communication: Ethics, Renewal, Excellence, Culture, Experiential Learning, & Diffusion. Students are expected to complete their course work, comprehensive exams, and a final project in two years. Opportunities for students interested in preparation for a doctorate after completing their master’s are available as well.

The Professional Communication Track is geared toward students seeking to enhance their communication skills and improve their abilities to positively influence internal and external communication in organizations. First year core course in theory and research lay a foundation for understanding and improving communication processes in a variety of settings.

The Health Communication Track includes the same first year core courses as the Professional Communication track, but in the second year, students venture into electives offered jointly by UALR and UAMS to prepare health professionals to meet the needs of current jobs in health-related fields.

We also offer a unique, combined program with the UAMS Fay W. Boozman College of Public Health. This 60 hour program provides training for students with an interest in serving communication roles in the public health arena. More information about the admission process and advising for this program can be found at the website.

Students interested in pursuing doctoral work may complete either of the above tracks. We encourage pre-doctoral students to take an additional research methods course and to revise and submit major course papers to professional conferences and journals. Students with interests in doctoral work thus gain the benefit of exposure to applied communication research and theory as well as the personal attention of faculty devoted to preparing them for the next step in their education.

Admission Requirements (for both tracks)
- Baccalaureate degree from an accredited institution with a cumulative grade point average of at least 2.75 (4.0 scale) or 3.0 in the last 60 hours
- An official transcript sent by the degree-granting university in a sealed envelope sent to the UALR Graduate School
- Two writing samples from previous course work or professional writing samples approved by the graduate coordinator. Email these documents to the graduate coordinator.
- Completion of 18 undergraduate speech communication hours or Speech 7390 (a preparatory three-hour summer course) with a GPA of 3.0 or higher.
- A list of three academic and/or professional references with contact information.

Admission materials for the fall of each year are due in the Graduate School by April 1, but applications are accepted until all slots are filled. Contact the program coordinator, Dr. Gerald Driskill, at (501) 569-3158 if you want to be considered for early or late admission.

Graduate Assistantships

A limited number of graduate assistantships are available. Contact the program coordinator for information. Deadline for application is March 15 or until qualified students are found for available positions.

Program Requirements

Professional Communication Track

The program is offered in the evening and weekends. Course work can be completed in two calendar years. Professional Track students are required to complete 33 credit hours, which includes 24 core hours (8 courses) plus 6 elective hours (2 courses) and a final project (3 hours). The 24-hour core (8 courses) begins at the start of the fall semester and must be completed in sequence. Two courses (6 hours) of electives are offered during summer semesters, but students seeking to take additional hours during the fall or spring may elect to take electives offered during the day, online, and/or during special weekend (5 week) courses. The final project (Speech 8301 Master’s Research Paper) grows from first year course work, and students are guided to complete this project during their second year. Students may also select a final project growing from an internship (Speech 8300 Internship or SPCH 8304/8604 Cooperative Education).

Example 2-year Plan (33 hours)

Fall – First Year
SPCH 7301 Human Communication Theory
SPCH 7321 Organizational Communication Theory

Fall – Second Year
SPCH 7330 Communicating Change
SPCH 7302 Interpersonal Communication

Spring – First Year
SPCH 7322 Organizational Communication Culture
SPCH 7350 Crisis Communication

Spring – Second Year
SPCH 8310 Seminar in Applied Communication Studies
SPCH 7323 Conflict

Summer – First Year
Health Communication Track

Health communication is a field of study that uses communication theory to prepare health professionals to meet the needs of current jobs in health-related fields. This track is offered jointly by UALR and UAMS. This track requires students to complete 15 credit hours of core courses and 15 credit hours of electives plus a 3-hour master’s project, for a total of 33 hours.

Core Courses

- SPCH 7321 Organizational Communication (fall)
- SPCH 7301 Communication Theory (fall)
- SPCH 7322 Organizational Culture and Communication Analysis (spring)
- SPCH 7350 Crisis Communication (spring)
- SPCH 7302 Health Communications/Interpersonal Communication
  or PBHL 5783 Health Comm (UAMS spring)

Elective Courses

- PBHL 5003 Introduction to Public Health* (UAMS fall, summer)
- PBHL 5123 Health Care Systems* (UAMS fall/spring)
- PBHL 5133 Intro to Health Behavior and Health Education* (UAMS fall, summer)
- PBHL 5653 Theories of Health Behavior and Health Education (UAMS fall)
- SPCH 7302 Interpersonal Communication
  or PBHL 5783 Health and Mass Communication (UAMS spring)
- PBHL 7023 Health Administration (UAMS)
- SPCH 5313 (Topic) Health Communication and Technology
- SPCH 7320 Communication Change and Information Diffusion (fall)
- PBHL 5143 Management of Health Care (UAMS)

*These two courses are best taken before others in the Public Health area.

Example Two-Year Plan

Fall – First Year

- SPCH 7301 Human Communication Theory
- SPCH 7321 Organizational Communication Theory

Spring – First Year

- PBHL 5003 Introduction to Public Health
- SPCH 7350 Crisis Communication
  or PBHL 5123 Health Care Systems Communication

Summer – Second Year

- SPCH 5313 Health Communication and Technology

Fall – Second Year

- SPCH 7320 Communication Change and Information Diffusion (fall)
- SPCH 7302 Interpersonal Communication
  or PBHL 5783 Health Comm.
Spring – Second Year

PBHL 5143 Management of Health Care Organization  
or PBHL 5783 Health and Mass Communication  
PBHL 5783 Health Comm.  
or SPCH 7322 Organizational Culture and Communication Analysis (spring)

A final project is also required. The student and his/her advisor should determine the term during which this requirement should be fulfilled.

Graduation Requirements (for both tracks)

- Cumulative GPA of at least 3.0 on an approved program of study
- Successful completion and defense of internship, master's paper, or thesis
- Successful completion of the comprehensive exam

Courses in Applied Communication Studies

**SPCH 5310 Investigations into Communication**  
Prerequisite: SPCH 1300, 4300. This course addresses the applied role of communication research methods in a variety of contemporary organizations. Topics include the research process, both quantitative and qualitative research approaches, as well as questions of research ethics. The focus is on identifying the practical applications of research methods for organizational members.

**SPCH 5311 Organizational Communication**  
Prerequisite: SPCH 1300 or consent of the instructor. This course examines organizational communication theories, communicative implications of historical and modern management theories, as well as special interest topics. Major topics include cultural and critical approaches to organizational communication, classical management and human relations theory, and communication effectiveness. Special topics may include teams in organizations, diversity, organizational politics, leadership, and change. The focus is on applying organizational communication theories and concepts to understand others better and to control one's own communication in organizations.

**SPCH 5312 Intercultural Communication**  
Prerequisite: SPCH 1300. This course examines culture as it influences human interaction in a wide range of contexts, including work, medical, interpersonal, and political. Topics include culture shock, language, nonverbal, intercultural conflict, and culture and the media. The focus is on using major intercultural communication theories and concepts as well as in-class activities to develop a heightened awareness of intercultural issues and intercultural communication competence.

**SPCH 5313 Seminar: Topics in Communication**  
Prerequisite: SPCH 1300. This course investigates timely communication theories, skills, and practices. Topics may be selected from a variety of theoretical or practical perspectives. The focus is on an in-depth treatment of a content area not typically represented in other courses in the major. This course may be repeated for credit.

**SPCH 5323 Family Communication**  
This course examines communication networks within families that support or inhibit cohesion or change. Topics include: family systems, communication patterns, self-disclosure, family themes, rules, relational stages, conflict styles, power, and decision-making. Students analyze applied communication research and theory and make application to cases.

**SPCH 5324 Organizational Communication II**  
Prerequisite: SPCH 5311. This seminar addresses special topics in organizational communication. Course topics may include organizational identification, risk and issue management, organizational change, or critical approaches to organizational communication. The focus is giving students an in-depth understanding of a specialized aspect of organizational communication.
**SPCH 5350 Effective Crisis Communication**
This course investigates and analyzes instances of effective and ineffective crisis communication. Students will examine the internal organizational processes and the larger environment within which various organizations exist, focusing on issues such as stakeholders, legal environments, and the larger social and cultural contexts.

**SPCH 5357 Communicating with Difference**
This course explores communication and difference in such areas as race and ethnicity, social class, age, sexual orientation, and disability. Through applying communication theories and ideas to our experiences in each of the targeted areas, we can emerge with tools to manage communication across lines of difference and create more positive social worlds. Dual-listed in the UALR Undergraduate Catalog as SPCH 4357. Three credit hours.

**SPCH 7300 Interpersonal Communication Concepts**
Prerequisites: graduate standing, consent of instructor. (For on-IOC graduate students.) Concepts of human interaction as basis for developing interpersonal communication skills, framework for personal growth in one-to-one interaction, small group dynamics, leadership roles, and other interpersonal relationships.

**SPCH 7301 Human Communication Theory**
Co-requisite: SPCH 7321. Basic theoretical approaches to human communication; includes symbolic interactionism, systems, rules, linguistics, relational, rhetorical theories. Offered in fall.

**SPCH 7302 Interpersonal Communication: Theory and Context**
Co-requisite: SPCH 7332. Influence of contexts on various theories of interpersonal communication; each theory is evaluated, placed in a relational context, considered for its applications to personal and professional interaction. Offered in fall.

**SPCH 7310 Topics in Interpersonal Communication**
Topics vary; chosen for interest, needs of current class; may include in-depth study of topics from earlier courses. Offered on demand.

**SPCH 7311 Small Group Communication**
Co-requisite: SPCH 7351. Systems study of small group formation, maintenance, performance; special attention to problem solving in groups. Offered in spring.

**SPCH 7312 Intercultural Communication**
Intercultural factors influencing human interaction; how cultures, subcultures interact verbally, non-verbally; how communication patterns are inherently culturally determined. Offered in summer.

**SPCH 7320 Topics in Organizational Communication**
Topics vary; chosen for interest, needs of current class; may include in-depth study of topics from earlier courses. Offered on demand.

**SPCH 7321 Organizational Communication Theory**
Co-requisite: SPCH 7301. Theoretic overview of organizational communication, includes communication flow, networks, organizational relationships, groups, conflict, language. Offered in fall.

**SPCH 7322 Organizational Communication Culture Analysis**
This course explores the concept of organizational culture and its relationship to effective and ineffective organizational communication. Students develop an understanding of a model for analyzing organizational culture and communication and apply this model to a case analysis.

**SPCH 7323 Conflict Analysis and Intervention**
An introduction to conflict dynamics with an emphasis on communication intervention skills; covers different frames for analyzing conflict analysis tools, opportunities for conflict self-assessment, and skill-building in difficult conversations.
SPCH 7324 Negotiation
Examination of the nature of conflict and presentation of theories and techniques of negotiation as a method of resolving or managing conflict. Students will analyze cases of negotiation at many levels such as buying and selling, contracts, group decision making, plea bargaining, international treaties, and organizational creation. Emphasis is on solving problems through negotiation. Consideration of the role of third parties. Current events are used for relevant examples.

SPCH 7330 Communicating Change and Information Diffusion
This course provides an understanding of diffusion theory, which seeks to explain the process through which new ideas (innovations) spread over time via communication channels among the members of a social system. Students will apply diffusion theory to corporate, public health, social change, and policy contexts.

SPCH 7332 Communication Assessment and Consulting
Co-requisite: SPCH 7302. Methods used to assess communication behavior in organizations, prepare intervention techniques, evaluate communication effectiveness. Offered in spring.

SPCH 7341 Organizational Communication Applications
Prerequisite: 15 program hours. Co-requisite: SPCH 7302. Role of applied behavioral research methods in developing effective communication in organizations; focus on use of organization development theories to change the way people in organizations communicate. Offered in fall.

SPCH 7350 Seminar in Effective Crisis Communication
This course investigates and analyzes instances of effective and ineffective crisis communication. Students will examine the internal organizational processes and the larger environment within which various organizations exist, focusing on issues such as stakeholders, legal environments, and the larger social and cultural contexts. Students will apply concepts to case analysis and development of crisis communication plans for actual organizations.

SPCH 7351 Managerial Communication
Co-requisite: SPCH 7311. Communication skills needed by supervisors, managers; focus on conflict management, interview skills (selection, performance appraisal, discipline, information gathering); includes theory, research, applied projects. Offered in spring.

SPCH 7352 Organizational Communication Training
Development, delivery of a training project; student prepares and presents an intervention for a specific organizational communication problem. Offered in summer.

SPCH 7390 Introduction to Graduate Study in Speech Communication
Prerequisite: program admission or consent of instructor. (Prerequisite course for entering students with fewer than 18 undergraduate speech hours; does not count toward degree requirements.) Speech communication theories, terminology; program writing, speaking responsibilities; emphasis on research skills necessary for the field. Offered in summer.

SPCH 8300/8600 Graduate Internship
Urban-related practical job experience; students apply theoretical knowledge, develop interpersonal and organizational communication skills, meet regularly to share experiences, write a paper related to experiences.

SPCH 8301/8601 Master’s Research Paper
Students apply theoretical knowledge to an action research project, dealing with the identification of a need in an organization and the implementation and evaluation of an intervention to meet that need.

SPCH 8310 Seminar in Applied Communication Studies
Prerequisites: SPCH 7301; SPCH 7321; plus 12 hours of graduate-level SPCH courses. This capstone seminar draws on various applied communication theories to engage students in reflection on two years of study in the program. Students develop and present their final project proposal for their MA in Applied Communication Studies. A final portfolio will be presented before
faculty and students. Only students who are in the final semester of this program are allowed to take this course.

**SPCH 8304/8604 Cooperative Education in Interpersonal and Organizational Communication**
Prerequisites: graduate standing and approval of assignment advisor. Job experience in an organization approved by the Speech Communication Department and the Cooperative Education Office. Students gain job experience through application of relevant theories, develop impersonal and organizational communication skills, meet regularly with their faculty member, and complete a major paper reflecting on their experiences in light of communication theory. This course requires a minimum of 200 semester work hours for 3 credit hours or 400 semester work hours for 6 credit hours.

**SPCH 8602 Master’s Thesis**
Prerequisite: successful completion of written comprehensive examinations. Preparation of an appropriate original investigation demonstrating knowledge and methods of scholarship.
Conflict Mediation

Ross Hall, Room 120, (501) 569-3244

Graduate Certificate in Conflict Mediation

Conflict management and mediation skills are important in any profession that involves working with people. Educators, social workers, human resource professionals, health care professionals, and leaders in public, private, nonprofit, and religious organizations are among those whose responsibilities include managing conflict.

The field of conflict mediation is expanding nationwide in business, government, and education. Conflict mediators assist individuals and groups in reaching agreements on matters ranging from employee grievances to child custody. Many courts are beginning to refer cases to mediation before they are litigated.

Whether you are interested in a career in conflict mediation or you feel that conflict mediation skills would enhance your effectiveness in your current career, this graduate certificate may be for you. Courses are scheduled on weekends for the convenience of working professionals and are taught by UALR faculty and by national experts in the field.

Students can complete the program in a year or can go at their own pace. Electives allow students to tailor the program to various interest areas. The program offers numerous and varied opportunities for developing skills in role-play situations with individualized feedback. For more information, please visit our website.

Admission Requirements

Successful applicants will hold a bachelor’s degree with a cumulative grade point average of 3.0 from an accredited college or university, be recommended for admission by a representative of the graduate certificate in Conflict Mediation; and be admitted by the UALR Graduate School.

The graduate certificate in Conflict Mediation is interdisciplinary. Certain courses may be approved as electives for other graduate programs; however, advance approval must be obtained from the other program’s advisor.

If you are a student in the graduate certificate in Conflict Mediation program and you also wish to enter another graduate program, you must go through the other program’s normal admissions process in addition to be admitted to the Graduate School.
Program Requirements

The graduate certificate in Conflict Mediation requires 18 credit hours for completion—three required courses (nine credit hours) plus three electives (nine credit hours). The following courses are required:

SPCH 7323 Conflict Analysis and Intervention
SPCH 7324 Negotiation
LAW 6304 Mediation Seminar

Students may choose three electives (nine hours) from the following:

SOWK 8320 Family Mediation
PADM 7341 Managing Public Disputes
TCED 7341 Conflict Management in the Schools
PSYC 7330 Designing ADR Systems for Organizations
SPCH 7350 Effective Crisis Communication
SPCH 5313 Facilitating Multi-Party Conflicts

Practicum (SPCH 8300)

Students who wish to engage in a practicum should submit a proposal to the Conflict Mediation program coordinator. The practicum must provide experience and assignments related to conflict mediation and make it possible to assign a grade to the experience. The experience and assignments should be equivalent to a three credit hour graduate course.

Financial Aid

Students in the Conflict Mediation certificate program who are enrolled in the Mediation seminar (LAW 6329) should contact the program coordinator if they are receiving federal financial aid. A form to verify their enrollment must be filled out and sent to the Office of Admissions and Financial Aid in order to ensure their funds are correctly applied.

Graduation Requirements

Cumulative graduate GPA of at least 3.0 on an approved program of study as outlined above.
Criminal Justice

Ross Hall, Room 517, (501) 569-3195

Master of Arts and Master of Science and Doctor of Philosophy

The Criminal Justice Department offers two master’s degrees in criminal justice, both a Master of Arts and a Master of Science, as well as a Doctor of Philosophy in criminal justice.

Master of Arts in Criminal Justice

The Master of Arts in Criminal Justice program prepares graduates for positions of responsibility in the criminal justice system and related areas, facilitates the professional and intellectual development of in-service students, and provides foundation work for those planning careers in research or teaching. The curriculum provides a distinctive melding of professionally structured knowledge and the ethical imperatives of criminal justice in a constitutional democracy. Attention is centered on:

- Understanding the broadest nature of scientific inquiry and dissemination of social science knowledge pertaining to criminal justice;
- The ability to organize literature, think critically, and draw conclusions from conducting independent research into criminal justice topics. Understanding of police, courts, corrections, prosecution agencies, and the criminal-legal profession as integral components of the criminal justice system;
- Knowledge of research and research methodologies needed to understand and improve criminal justice and criminology; and
- Understanding of criminological theories for studying issues of crime and behavior.

For more information, visit the [program’s website](#).

Admission Requirements

Students should submit all undergraduate transcripts and other materials to the UALR Graduate School. Do not send materials to the Department of Criminal Justice.

Admissions decisions are made based on a total file review. Expectations of those applying include the following:

- Baccalaureate degree from an accredited institution with a cumulative grade point average of at least 2.75 (4.0 scale)
Conditional Admission

Students not meeting the standardized test score requirements may be admitted conditionally at the discretion of the program coordinator. Students admitted conditionally must earn grades of at least B in the first 12 hours and may not receive a grade of (I) incomplete within the first 12 hours of the program.

Program Requirements

Two options are available for graduation from the MACJ program: thesis and portfolio. Both options require 36 hours to successfully complete the program including CRJU 8301 Thesis/Portfolio Prep and 8303 Thesis/Portfolio. Both thesis and portfolios require an oral defense. Before enrolling in graduate classes, students must consult with the program coordinator to develop a program of study.

The thesis requires research and analysis of a topic in the field. It must demonstrate advanced scholarship, appropriate design, and skills of written expression. A total of six hours of CRJU 8303 and CRJU 8301 must be completed.

The portfolio requires a comprehensive literature review, critique of the literature, and direction for future study and policy on the topic. A total of six hours of CRJU 8303 and CRJU 8301 must be completed. Electives may be taken from criminal justice or from education, gerontology, history, applied communication studies, journalism, psychology, public administration, social work, and professional and technical writing.

Courses with grades of B or greater may not be repeated; grades below C are not accepted in the minimum hours requirement; and courses cannot be dropped from the study plan because of low grades. Students may receive a maximum of two Cs in the program of study. Upon receiving a third C, the student will be removed from the program.

Suggested Degree Plan

Fall First Year

CRJU 7301 Pro-seminar
CRJU 7300 Criminological Theory
CRJU 7392 Research Methods

Spring First Year
CRJU 7391 Social Statistics
CRJU 7305 Seminar in Criminal Law
CRJU 7322 Foundations of Policing

Fall Second Year

CRJU 7370 Juvenile Delinquency Problems
Elective 1
Elective 2

Spring Second Year

CRJU 7340 Correctional Administration
CRJU 8301 Portfolio / Thesis Preparation
CRJU 8303 Thesis / Portfolio

Graduate Assistantships

A limited number of graduate assistantships are available. Contact the program coordinator for information.

Graduation Requirements

- Cumulative GPA of at least 3.0 on an approved program of study as outlined above.
- Successfully complete a written thesis with oral defense or portfolio with oral defense.
- Students who do not attain a 3.0 GPA within the required hours may complete no more than six additional hours to achieve the GPA.

Master of Science in Criminal Justice

The Master of Science in Criminal Justice (MSCJ) is designed to develop the essential knowledge and skills needed to become an effective practitioner or supervisor within the criminal justice system. The MSCJ program is designed for, but not limited to, people currently working in the criminal justice system or closely related fields. The MSCJ program is delivered entirely online.

The MSCJ provides students with advanced academic training, special expertise in advanced issues within the criminal justice system, supervisory and administrative proficiency, and the methodological and statistical skills necessary to understand research and new developments in criminal justice. The program increases abilities in critical thinking, problem solving, oral and written communication, and understanding of the criminal justice system in the U.S. It presents an integrated program of study that is academically rigorous and practically oriented. It is appropriate for students who:
Students will be guided through an intense, supervised course of study of the history and current issues in criminal justice, criminal justice policies and practices, and ways to improve those practices. This program also requires work in qualitative and quantitative methodologies, statistical analysis, and research design sufficient to make graduates proficient in consuming and understanding research that may be needed in management positions. All course work builds toward a policy thesis, which demonstrates an understanding of a criminal justice issue and the policy implications of that issue. Graduates of this program will be expected to continue their work in the criminal justice field, be prepared to handle increasing responsibilities in their jobs, and gain promotions to the highest levels of their organizations. The program is offered fully online and is built around eight week courses each term throughout the year.

For more information, visit the program’s website.

Admission Requirements

Application requirements for admission to the MSCJ program are as follows. (Students should submit all undergraduate transcripts and other materials to the UALR Graduate School. Do not send materials to the Department of Criminal Justice):

- A baccalaureate degree from an accredited institution with a cumulative grade point average of at least 2.75 (4.0 scale)
- Applicants are required to score at least 145 on the verbal portion, 140 on the quantitative portion, and 3.0 on the writing portion of the GRE; or score at least 400 on the Miller Analogies Test (MAT).

Conditional Admission

Conditional admissions are possible for low test scores but not low GPAs. Conditional admissions will be determined by the MSCJ graduate coordinator in consultation with the Graduate School.

Students not meeting the standardized test score requirements may be admitted conditionally at the discretion of the program coordinator. Students admitted conditionally must earn grades of at least B in the first 12 hours and may not receive a grade of (I) incomplete within the first 12 hours of the program.

MSCJ Admissions Process
Complete online application and submit other Graduate School requirements. An application fee of $40 will be required.

Mail official transcripts from undergraduate institution(s) and copies of MAT or GRE score.

University of Arkansas at Little Rock
Graduate School
2801 S. University Avenue
Little Rock, AR 72204-1099

International Students

International students may apply for the MSCJ program. They should follow the steps at the international prospects webpage.

Program Requirements

To graduate, students must complete a capstone. Required courses establish the foundation of knowledge in criminal justice and include information all students should possess when they graduate. Students can expect to take a maximum of three hours in each eight week term. The program will typically take two years to complete if the student attends each of the six terms during the year. The MSCJ program is delivered entirely online. Lectures may take the form of material presented by the professor (text, Power Point, etc.), guided lectures with voice-over visual material, or video presentations students download and watch. Students will be required to participate in courses through presentations and discussions on the class discussion list. Students will also be required to complete writing assignments associated with the course, ranging from short concept papers to more extensive term papers.

The capstone project requires a comprehensive literature review, critique of the literature, and direction for future study and policy on the topic.

Electives may be taken from criminal justice or from education, gerontology, history, applied communication studies, journalism, psychology, public administration, social work, and professional and technical writing.

Courses with grades of B or greater may not be repeated; grades below C are not accepted towards graduation and courses cannot be dropped from the study plan because of low grades. Conditional students must earn grades of at least B in the first 12 hours and may not receive a grade of incomplete (I).

Required Core Courses (18 hours)

CRJU 7301 Proseminar
CRJU 7320 Applied Research and Analysis
CRJU 7321 Criminal Justice Organizations and Management
CRJU 7304 Criminal Justice Policy
CRJU 7305 Criminal Law
CRJU 7330 Capstone Project

Electives

CRJU 7303 Criminal Justice Systems
CRJU 7322 Foundations of Policing
CRJU 7323 Ethics in Criminal Justice
CRJU 7340 Corrections Administration
CRJU 7370 Juvenile Delinquency Problems
CRJU 7390 Independent Study
CRJU 7393 Special Topics (May be repeated for credit)

Degree Plan

Please consult with the CRJU-M.S. graduate coordinator.

Doctor of Philosophy in Criminal Justice

Students in the Ph.D. program in Criminal Justice are guided through an intense, supervised course of study of history, current issues, and research related to criminology and criminal justice. This program requires extensive work in qualitative and quantitative methods, statistical analysis, and research design. The program provides students an understanding of the value of research. Students will be trained to be prolific writers and skilled at obtaining grants. Coursework and mentoring will provide students with other aspects of professional development, including teaching and pedagogy, services to the discipline, and program administration.

The curriculum consists of 57 graduate semester hours beyond the master’s degree. These hours are divided into five sections:

1. research design and statistical analysis,
2. crime and justice,
3. electives and specialization,
4. research practicum, and
5. dissertation.

The courses combine to produce students who have mastered the theories of crime and justice and who have acquired research and statistical techniques sufficient for high levels of analysis and evaluation. All courses will be taught in the classroom or in consultation with individual faculty; none will be taught on-line.
Admission Requirements

Admissions decisions into the doctoral program will be made based on a total file review. Application must meet all admissions standards of the UALR Graduate School. Students will only be admitted in the fall semester each year.

The following criteria are recommended for successful candidates for admissions:

- Score at least 300 on the combined verbal and quantitative portions of the new Graduate Record Exam (GRE) or 1000 on the old test, and at least 4 on the written portion of the GRE.
- Have a cumulative GPA in their master’s program of at least 3.5.
- International students must take the TOEFL exam and score 550 on the paper-based test, 213 on the computer-based version or a 79 on the Internet-based version.
- Applicants must submit official copies of their transcripts and GRE scores to the UALR Graduate School.
- Applicants must also submit a statement of purpose and a career development plan. The statement of purpose should consist of two parts: a statement of what the applicant sees as the role of Ph.D. in criminal justice, and a statement of the applicant’s understanding of the role of research in criminal justice. The career development plan should describe in detail what the applicant plans to do following completion of the Ph.D. This statement must be more than “I want to work as a teacher at a university,” and should include a potential research and publication agenda.
- Applicants will also be required to submit a writing sample to be considered by the admissions committee.
- Two professional letters of recommendation (one of which must come from a graduate-level teacher) are required.
- Admissions to the doctoral program will require either a master’s degree in criminology/criminal justice, or closely related field, or substantial progress (defined specifically below) toward completing a master’s degree. Students who are admitted from relevant master’s programs at universities other than UALR, but who have not completed their master’s thesis may be admitted as regular admits, but will be required to complete their thesis within one year of joining the Ph.D. program. If a student fails to complete the thesis in that period of time, the student will be suspended from enrolling in Ph.D. courses until the thesis is completed. These students must have completed all required course work and have only the thesis to complete.
- Students who want to enter the Ph.D. program directly from an undergraduate program must first apply to the M.A. in Criminal Justice. After a student has completed a minimum of 21 hours in the M.A. program, that student may transfer to the Ph.D. program with approval of the doctoral coordinator. In such cases, students who fail to complete the Ph.D. program will be awarded an M.A. degree after successful completion of 36 credit hours
Admission decisions will be made by a committee of doctoral faculty. The doctoral admissions committee will also take the “fit” between the applicant and the doctoral program into account when making admission decisions, and may decline to admit an otherwise qualified applicant based on lack of fit with the program.

Conditional Admission

The doctoral admissions committee may conditionally admit a student for one semester who does not meet all of the requirements for admission. Such students will be evaluated by the doctoral admissions committee after one semester and a decision made to:

- continue conditional status,
- grant full admission to the doctoral program, or
- dismiss the student from the doctoral program.

Financial Assistance

A number of financial assistance opportunities are available to full-time doctoral students. Fellowships will be awarded in the amount of $19,000 and will also cover tuition (fees will not be covered in fellowships/assistantships). Assistantships will be awarded in the amount of $15,000 and will cover tuition. Efforts are made by the program to provide some type of financial support to all full-time doctoral students. Any funding decision, however, is dependent upon the availability of funds. It is expected first year doctoral students will primarily conduct research. In the second year (and subsequent years), doctoral students may be Research Assistants or Teaching Assistants with one or two of their own classes.

Program Requirements

Student Advising

The doctoral coordinator will be the primary contact person for all Ph.D. students. The doctoral coordinator will be available during the summer semesters, as well as available during evening hours at selected times to facilitate communication with all students.

At the end of the first semester and at the end of the first year, all doctoral students will meet
The doctoral coordinator will obtain information from each course instructor of the student, from the student’s assistantship advisor, and from any faculty who wish to make input. The meeting will address the strengths of the student and point out areas the student needs to strengthen. The result of the meeting will be a determination whether the student will be retained in the program or dismissed.

Coursework

The program will include both day and night classes. Most of the classes specifically for doctoral students will be taught during the day. Courses that are for both doctoral and master’s students may be taught at night. There is a residency requirement of full-time status (nine hours) for two, consecutive full term semesters.

Research Design and Statistical Analysis Course (15 hours)

Courses in research and statistics are designed to produce an ability to frame issues and relevant research questions related to the study of crime and justice, to select the most appropriate statistical techniques, and to properly interpret the results. Students must take a minimum of 15 hours from the following list of courses:

- CRJU 7391 Social Statistics
- CRJU 7392 Research Methods in Criminal Justice & Criminology
- CRJU 8312 Secondary Data Set Management
- CRJU 8315 Multivariate Statistics
- CRJU 8314 Mixed Methodologies

Other statistics and/or methods classes offered at the university and agreed upon by the program coordinator

Crime and Justice Courses (12 hours)

Courses include specific or advanced topics on crime and justice. Students are expected to have some knowledge of theories of criminology and criminal justice before entering the doctoral program. These courses will build on that knowledge to provide expertise in the core areas related to criminal justice (police, courts, corrections, and criminological theory). Students must select Proseminar and nine hours from the following courses:

- CRJU 8310 Proseminar
- CRJU 7300 Criminological Theory
- CRJU 8313 Advanced Criminological Theory
- CRJU 8321 Teaching Practicum

Students may also take courses from CRJU 7393, Special Topics to fulfill this requirement.
Elective Courses (9 hours)

Students may take one of three specialization areas or may form a topical specialization with the approval of the dissertation committee and doctoral coordinator.

The three specialization areas are policing, corrections, and crime related to the environment. The specialization areas are designed to give students more in-depth knowledge in a particular content area of criminal justice and criminology. The specialization in policing will examine theories, practices, and policies related to the historical development and current practices of police. The specialization in corrections will examine correctional theory both of institutional corrections and community based corrections. The specialization in crime related to the environment of neighborhoods and cities will prepare students to conduct research on crime in metropolitan areas, including the mobility and interaction of residents; urban design in preventing crime; and the relationship between social, physical, and economic networks and crime.

Students selecting this specialization will take all of the courses from the Criminology Core and then take six hours in their specialization area. All students will take the teaching practicum. Students must take six hours from the following courses:

- CRJU 7322 Foundations of Policing
- CRJU 7340 Correctional Administration
- CRJU 8331 Urban Spatial Structures
- CRJU 8332 Theories of Neighborhoods and Crime
- CRJU 8373 Critical Issues in Criminology
- CRJU 8383, Research Practicum (12 hours)

Practicum

Research Practicum is the point in the program where students begin to put their coursework and skills in criminal justice, research design, and statistical analysis into practice.

**Dissertation:**

CRJU 8393, Dissertation (12 hours)

Upon reaching candidacy status, students may enroll in dissertation hours and begin work on the dissertation. The dissertation will be guided by the student's dissertation committee. The dissertation committee will be composed of a chair, two members of the doctoral staff, and an outside reader. The outside reader may be a faculty member with graduate faculty status from UALR, or may be a faculty member from another institution. The outside reader will serve in an advisory capacity only and will not vote on the prospectus or final defense of the dissertation. Successful completion of the dissertation will require an oral proposal defense, where the student will defend his or her topic and methods, and a final defense, where the student will defend his or her finding and conclusions. Policies and procedures for passing, failing, and repeating the dissertation defense will be in compliance with the UALR Graduate School.

Comprehensive Examinations and Dissertation
All Ph.D. students are required to take comprehensive examinations. The comprehensive examinations are designed to test the ability of the student to undertake independent research in a particular area and publish the results.

Examining Committee

Each year, an examining committee will be established for the incoming cohort of Ph.D. Students. This committee will be recommended by the doctoral coordinator. The examining committee will be the body that reviews the comprehensive exams for all students in that cohort. This body will serve until all members of that cohort have completed the examination process, recognizing that members of the cohort will complete the process at differing times. Students will complete one publishable quality paper for presentation to the examining committee. This paper must be completed independently and cannot have significant faculty input. Some of the work may be completed as part of course work; but the majority of the comprehensive exam must be original work, self directed by the student.

At a minimum, the comprehensive exam must contain an Introduction, Problem Statement, Research Question, Methods, Finding, and Conclusions. The methods and analysis must be quantitative, qualitative, or mixed methods and must present results sufficient to warrant publication in a journal. It must be written in Chicago Citation Style and be polished without significant grammatical errors.

Students will deliver comps to the graduate coordinator who will submit them to the committee for blind review. Once the paper has been passed by the committee, the student is then free, and encouraged, to work with a faculty member to get the work published. Results of the examining committee will be one of the following:

1. pass,
2. revise and resubmit, or
3. fail

If a student receives a revise and resubmit, that student will have a timeline determined by the examining committee to get the paper returned for reconsideration. If the paper is not returned within that period of time, the outcome will be changed to a fail and the student will be dismissed from the program. Students are allowed a maximum of 2 revise and resubmit decisions. If the paper is not acceptable on the third version of the comprehensive exam, the outcome will be changed to a fail and the student will be dismissed from the program. Any student who receives the decision of “fail” will be dismissed from the program.

Upon successful completion of the comprehensive examinations, the student will be advanced to candidacy. Each student will also complete a dissertation of sufficient scholarly nature to contribute to the field of criminology/criminal justice. The dissertation will be guided by the student’s dissertation committee.
Dissertation Committee

Before choosing a topic for dissertation, students must choose a dissertation committee. The Chair of the committee must be a member of doctoral faculty in the Department of Criminal Justice as defined in the governance document. At a minimum, committee members must hold a Ph.D. in the field, teach doctoral classes at UALR, hold graduate faculty status as defined by the UALR Graduate School, and be research active as defined in the governance document.

Dissertation committee members must participate in the lecture series, be available during the summer, and be active in conducting and publishing research in the discipline. In addition to the Chair, the committee must be comprised of at least one statistician or methodologist. One member should be a content specialist. The outside reader may be a faculty member with graduate faculty status from UALR, or may be a faculty member from another institution. The outside reader will serve in an advisory capacity only and will not vote on the prospectus or final defense of the dissertation.

Successful completion of the dissertation will require an oral proposal defense, where the student will defend his or her topic and methods, and a final defense, where the student will defend his or her findings and conclusions. Defenses are advertised and open to the entire UALR community. Policies and procedures for passing, failing, and repeating the dissertation defense will be in compliance with the UALR Graduate School.

Courses in Criminal Justice

**CRJU 5300 Crime and Behavior**
Contemporary criminological theories of factors contributing to crime and social disorder.

**CRJU 5301 Judicial Process and Behavior**
Literature on topics such as judicial selection, impact of court decisions, court procedure, factors affecting decision-making behavior of judges.

**CRJU 5302 Law and Society**
Role of law in modern society; emphasis on legal theories shaping U.S. legal system, theories of justice, legal reasoning, and application of these theories to real-world problems as introduction to the role of law in helping settle social conflicts.

**CRJU 5380 Comparative Criminal Justice Systems**
Law enforcement, judicial, correctional systems of other nations; emphasis on comparison with U.S.

**CRJU 7300 Criminological Theory**
Original works of criminological theorists from biological, psychological, sociological, and political perspectives; empirical, methodological adequacy of theories and literature; current application as viable explanation of criminal behavior.
CRJU 7301 Pro-seminar
A critical examination of the theoretical, methodological, and policy issues in criminal justice and criminology. Explores organized knowledge about enduring theoretical and policy questions concerning crime and justice; examines the theoretical foundations of crime control, the relationship between criminal justice agencies, and the relationship between the criminal justice system and its social, political, and economic environments. Also provides students with an overview of criminal justice in higher education and requirements of a graduate education.

CRJU 7303 Criminal Justice Systems
This course will discuss the major functional components of the criminal justice system from the historical, philosophical and system perspectives. It will analyze the interrelationships among components, and identify the impact of social and political forces on roles and functions of criminal justice agencies.

CRJU 7304 Criminal Justice Policy
This course is designed to prepare students to understand and influence policy issues in criminal justice. The course will build upon the CJ systems course to provide a base of knowledge in policy analysis, policy research, and working within the system for policy change. This course will be specific to criminal justice policy issues, and will prepare students to complete their public policy thesis.

CRJU 7305 Seminar in Criminal Law
Major concepts of criminal law; includes various states’ approaches to definitions of crimes, criminal responsibility, criminal defenses.

CRJU 7320 Applied Research and Analysis
Examines the major concepts, techniques, and application of statistical methods in criminal justice. Topics include understanding when statistical techniques are appropriate, interpretation of results, organization and presentation of numerical information, and introduction to descriptive statistics.

CRJU 7321 Criminal Justice Organizations and Management
An overview of major theories of criminal justice organizations and management. The course will center on police and correctional organizations but may be applied to any criminal justice organization. Among the topics studies are leadership, personnel, organizational and political environments, and organizational development.

CRJU 7322 Foundations of Policing
Specific aspects of American police agencies’ organizational patterns, administrative problems, community issues, internal role systems.

CRJU 7323 Ethics in Criminal Justice
Overview of ethical theory, doctrines, and controversies in the field of criminal justice. Emphasis is placed on the dilemmas faced by criminal justice practitioners and supervisors seeking to make
appropriate ethical judgments and decisions that are in keeping with the goals of justice.

**CRJU 7324 Human Resource Management**
A number of recent developments, including demographic changes in the labor force increased global competition, experiments with new organizational arrangements, and public policy attention to work force issues have made human resource management increasingly important for law enforcement and correctional managers. This course will cover a broad range of topics associated with HR management specific to the domain of law enforcement and corrections from differing perspectives. Topics covered will include recruiting/selection of employees; training, motivation, and evaluation; retention; discipline and termination; EEO; policy development, and implementation; legal issues and civil liability.

**CRJU 7325 Cyber Crime and Information Systems Security**
Provides a foundation for the use of Geographic Information Systems (GIS) in analyzing data and making policy decisions. Topics include the use of GIS as a visual representation of demographic and infrastructure data, using GIS to summarize information, and use of GIS computer software.

**CRJU 7326 Public Budgeting**
Budgeting touches every aspect of the public sector, demanding that anyone concerned with policy making and implementation understand how the process works. This class covers the terminology, components, practices, documents and methods of public budgeting and finance at all levels of government and in the non-profit world. Among other things, students will gain an understanding of the budget process, prepare basic budgets, practice using budge documents to do analysis, learn how to evaluate an organization’s finances using financial reports, and write a financial analysis.

**CRJU 7330 Capstone**
The criminal justice capstone course is designed to assist students in the integration and synthesis of their graduate experiences from both a theoretical and policy framework. The end product, a Capstone Paper, will provide a means for demonstrating mastery of the discipline and a vehicle for future work and study in the criminal justice profession.

**CRJU 7331 Community-Based Corrections**
Traditional correctional functions; emphasis on development of community diversion and residential programs, involvement of correctional programs in the community.

**CRJU 7340 Correctional Administration**
Problems with control and treatment of offenders in institutional correctional settings.

**CRJU 7341 Teaching Practicum**
Prepares students to teach criminology/criminal justice courses. Covers aspects of presentation, pedagogical issues, giving and grading tests, and handling problem students. Also addressed will be expectations and activities involved in being a faculty member.
CRJU 7360 Deviant Behavior
See Psychology 7360.

CRJU 7361 Social Psychology
See Psychology 7361.

CRJU 7370 Juvenile Delinquency Problems
Topics related to juvenile delinquency and prevention in the juvenile justice system.

CRJU 7390 Independent Study
Prerequisites: graduate standing, consent of program coordinator. Intensive research under faculty supervision or practical experience in a selected criminal justice agency. Requires completion of a research paper.

CRJU 7391 Social Statistics
Logic, uses of statistical analysis in social science research; focus on statistical design of research projects, analysis of computer-generated output, statistical procedures and results; critique of statistical adequacy of related literature.

CRJU 7392 Research Methods in Criminal Justice and Criminology
Methods and techniques of research in the behavioral sciences. Includes an in-depth analysis of the conceptualization of research and the design of appropriate research strategies. Topics covered include experimental design, questionnaire construction, observational techniques, and qualitative research designs.

CRJU 7393 Seminar on Special Topics in Criminal Justice
Crucial criminal justice topic determined by student interest, available faculty resources; emphasis on exhaustive analysis of literature in the subject area.

CRJU 8193 Dissertation
Requires consent of advisor. Students will work with advisory committee to complete dissertation.

CRJU 8301 Portfolio Preparation
The portfolio will consist of a comprehensive literature review on a topic of interest to the student which is to be selected in consultation with a graduate review committee. The portfolio will include a critique of the relevant literature, including any conflicts that exist in previous research, and direction for future research on the topic. The portfolio must be approved by the student’s graduate review committee. Students are expected to provide an oral presentation on the portfolio to the committee.

CRJU 8302 Policy Portfolio Preparation
This course will facilitate completion of the policy portfolio needed for graduation from the policy track of the MACJ program. Topics covered in this course include review of the literature, to include cases and laws; gathering policies, mandates, and legislation on the topic; research
concerning policies of agencies, and qualitative / quantitative research methodologies. The product of the course will be a complete policy portfolio.

**CRJU 8303 Thesis**
Independent investigation demonstrating knowledge and methods of scholarship and culminating in a written thesis with oral defense. Variable credit of one to three hours.

**CRJU 8310 Doctoral Proseminar**
Provides a foundation for the study of crime and justice and an introduction to the role of Ph.D.s in criminology/criminal justice. Topics include current trends in higher education, employment and career planning, and the role of academics in reducing crime. The course will also serve as an introduction to the doctoral program and writing refresher for incoming doctoral students.

**CRJU 8311 Survey of Theories of Justice**
Addresses the theoretical foundation of the justice system in the U.S. Topics include theories related to policing, law, corrections, and juvenile justice. This course provides a foundation for the advanced studies of topics in other courses in the doctoral program.

**CRJU 8312 Secondary Data Set Management**
Provides an understanding of secondary data sets and how they can be used in analyses and program evaluation. Topics include data cleaning for accuracy and efficiency, recording variables, and preparing data sets for analysis with SPSS.

**CRJU 8313 Advanced Criminological Theory**
Current works in criminological theory. Addresses updates of classical criminological theories as well as theories and research within the previous ten years.

**CRJU 8314 Mixed Methodology**
The course provides instruction in advanced methodologies of criminal justice and criminological research. Students will be exposed to a variety of qualitative techniques in addition to quantitative techniques of research methods. CRJU 7392 should be completed prior to taking this class. Enrollment in this course is restricted to students enrolled in the Ph.D. in Criminal Justice. Students from outside the CRJU Ph.D. program who wish to enroll must have permission of the Criminal Justice graduate coordinator and the professor of records.

**CRJU 8315 Multivariate Statistics**
This course provides instruction in advanced multivariate statistical application. CRJU 7391 should be completed prior to taking this class.

**CRJU 8331 Urban Spatial Structures**
Provides an understanding of American cities, how they have changed over time, and how the spacio-temporal characteristics influence criminal behavior.

**CRJU 8332 Theories of Neighborhoods and Crime**
The goal of the course is to provide a comprehensive theoretical background upon which to conduct research on neighborhoods and crime.

**CRJU 8333, Theory and Practice of Spatial Analysis**
Advanced analysis of data related to crime in the urban environment. Topics include using Spatial Analyst, CrimeStat III, and other spatial statistics. Theories of neighborhoods and crime will be tested using data on crime and social dynamics.

**CRJU 8373 Critical Issues in Criminology**
This course is designed to provide in-depth readings on topical subjects that are pertinent to student’s concentration area. Students will be provided with a readings list and will be required to demonstrate analysis of information from that list in the form of papers, presentations, and special topic discussions.

**CRJU 8383 Research Practicum**
Course goals are to: 1) give students experience in writing grant proposals and obtain funding, 2) give students experience in designing research and putting research in practice, 3) give students practical experience in conducting research, and 4) build on student knowledge in analysis and research in preparation for completing their dissertation.

**CRJU 8393 Dissertation**
Requires consent of advisor. Students work with advisory committee to complete dissertation.
Mass Communication

Stabler Hall, Room 705, (501) 569-8371

Master of Arts in Mass Communication

The Master of Arts in Mass Communication program is located within the School of Mass Communication (SMC) and emphasizes critical thinking about journalistic media content and its effects on the public. It also teaches students how to analyze and conduct scholarly research in Mass Communication and how to write up and present the results of such research to both scholarly and non-scholarly audiences. Although the program does not emphasize the teaching of journalistic writing skills, it does offer limited opportunities to earn graduate credit in advanced skills course work in Mass Communication and public relations.

The program is open to students with undergraduate majors or minors in Mass Communication, to working journalists, and to those without Mass Communication backgrounds who are willing to complete several undergraduate Mass Communication skills courses, as determined by the program coordinator upon admission.

Most of the program’s graduate courses are offered during the evening and in the early morning for the convenience of the working professional. Generally, these courses meet once a week for approximately three hours.

Admission Requirements

- Baccalaureate degree from an accredited institution with a grade point average of at least 3.0 (4.0 scale) on the last 60 hours of undergraduate credit
- Letter of 250-500 words outlining professional goals and purpose for desiring the degree
- A résumé of professional and academic experience and accomplishments
- Two letters of recommendation from former professors who can evaluate the applicant’s academic abilities

All of these materials, including official transcript(s) from the institution(s) awarding the last 60 undergraduate semester hours, all graduate hours, and all degrees must be submitted to the UALR Graduate School. In evaluating each applicant, the graduate program admissions committee weighs the transcript(s) and evidence of professional competence or potential. Students whose application materials do not satisfy regular admission requirements may submit scores from the Graduate Record Examination (GRE) as supplemental information to be considered by the admissions committee.
Program Requirements

The Mass Communication graduate program offers two options: thesis and professional. A comprehensive project and at least 33 hours of study at UALR are required of all students. Each student’s program is subject to an adviser’s approval.

All courses usually are taken in the School of Mass Communication; however, up to nine approved cognate graduate hours may be taken in other graduate areas. In some instances, courses from another area can form a concentration area. Only six hours with grades of C can count toward the degree.

If a student’s cumulative GPA falls below 3.0, that student may enroll for only three credits per semester until the GPA rises to 3.0 or higher. The Mass Communication graduate program coordinator may make exceptions to this rule, if circumstances warrant them. Students who have not studied Mass Communication at the undergraduate level or who do not have sufficient professional Mass Communication experience to master basic news writing, reporting, and editing skills will be required to complete any or all of the following courses:

MCOM 2350 Beginning News Reporting
MCOM 3320 Advanced Reporting

Two of the following courses may be required for graduate credit:

MCOM 5350 Design and Production
MCOM 5352 News Media and the First Amendment
MCOM 5358 Reporting of Public Affairs

Students without an undergraduate background in Mass Communication should take MCOM 5352, News Media and the First Amendment. This class should be completed, either at the graduate or undergraduate level, before taking MCOM 7330, Seminar in Mass Communication Law. Students without a solid knowledge of mass communications history should consult with the Mass Communication graduate program coordinator about how to overcome that weakness.

Program Options

Thesis Option

Requires 33 graduate credit hours, including MCOM 7300 and 7305, 7335, 7340, and a six-hour thesis with oral defense (MCOM 8300 or 8600).

Professional Option

Requires 33 graduate credit hours, including MCOM 7300, the student’s choice between 7335 or 7340 and an approved professional project (MCOM 7180, 7280, 7380).
Transfer Credit

Up to six graduate hours with grades of B or greater may be transferred from an accredited institution, if approved by the Mass Communication graduate program coordinator.

Use of Materials

All materials submitted by students as assignments in writing, reporting, editing, photography, and electronic news gathering classes are subject to broadcast or publication. The School of Mass Communication uses a variety of electronic and print media outlets.

Graduate Assistantships

A limited number of graduate assistantships may be available. Contact the graduate program coordinator for information.

Graduation Requirements

- Earn a cumulative GPA of at least 3.0 on an approved course of study as outlined above.
- Complete the professional project or thesis, if applicable.

Courses in Mass Communication

**MCOM 5350 Design and Production**
Prerequisite: junior status and MCOM 2320 or consent of instructor based on demonstrable professional experience. Decision-making in the editing process. Principles of typography and design for print and online media.

**MCOM 5352 News Media and the First Amendment**
Prerequisites: junior standing; MCOM 3360 recommended prerequisite. The restrictions, obligations, and responsibilities of the news media; the law and its effect on publishing and broadcasting; relations between the law and freedoms protected by the U.S. Constitution.

**MCOM 5357 Seminar in Radio-Television Journalism**
Broadcast news policies; history; governmental, other forms of regulation; social implications; influence of various publics on radio-television news coverage.

**MCOM 5358 Reporting of Public Affairs**
Prerequisites: MCOM 2320, 2350, and 3320; MCOM 3315 and 3360 may be taken as prerequisites or corequisites; or consent of instructor based upon demonstrable advanced media experience. Practice in gathering materials and writing in-depth stories on public affairs;
emphasis on courts, police, government, education, ecology, the economy, and social issues.

**MCOM 5359 Feature and Magazine Writing**
Prerequisites: MCOM 2320 and 2350. Planning, researching, and writing the feature article for newspapers, magazines, and online publications. Emphasis on humanistic reporting and providing a context for the news through thorough research and application of this research to the article. Materials submitted as assignments are subject to publication.

**MCOM 5375 Journalistic Freedom and Responsibility**
Journalistic ethics and practices; professional conduct, responsibilities of the journalist in a free society.

**MCOM 5380 Public Relations Writing**
Prerequisites: MCOM 2320 and 2350; MCOM 2350 may be corequisite. The journalistic function in public relations, includes the writing and processing of news and feature releases for print and electronic media and editing internal and external publications.

**MCOM 5381 Public Relations Cases**
Three credits. Study of recent public relations cases involving business, industry, institutions and government. Students will also be introduced to public relations theories as they are applied in case studies and will analyze cases in terms of their component parts.

**MCOM 5384 Topics in Mass Communication**
Prerequisite: junior standing and consent of instructor. Advanced and specialized topics in mass communication, especially those of current interest and relevance to mass communication professionals. Possible subjects include the following: journalism, entertainment, production and design, Web and media, strategic communication, mass media, etc. Classes will provide an in-depth understanding of topics chosen. Refer to the semester schedule for specific topics offered.

**MCOM 5386 Images of Minorities in the Media**
This course examines the material and ideological representations of various racial and ethnic groups in the United States as reflected in the media including both historical and contemporary depictions. Students explore theories including racial formation, otherness, and commodification among others. In this course, students learn the origins of ideological and material representations of minorities; how they are maintained in the culture and in the media; the similarities and differences in depictions among and across racial and ethnic groups; and the impact of these representations on the various minority groups and society as a whole.

**MCOM 7180, 7280, 7380 Special Problems in Mass Communication**
Prerequisite: consent of a graduate faculty member. Individual work on selected problems in mass communication.

**MCOM 7190, 7290, 7390 Readings in Mass Communication**
Prerequisite: consent of a graduate faculty member. Individual readings of selected works in
mass communication.

**MCOM 7300 Proseminar in Mass Communication**
Introduces graduate students to Mass Communication graduate program content and faculty expectations; to IRB certification; to social-science research techniques and interpretation; to scholarly manuscript process and presentation; and to post-MA career possibilities, both professional and academic.

**MCOM 7305 Mass Communication Processes and Effects**
Structure, theory, processes, effects of mass communication, mass media in the U.S.; relationships of media to one another, to other major institutions in U.S. society, to individuals and groups.

**MCOM 7310 Precision Journalism**
Application of behavioral science methodology to news reporting, especially to reporting of governmental, public affairs.

**MCOM 7315 International Mass Communication**
Comparison, contrast of mass media around the world; interaction between media and governments; role of media in the development of nations; international communication theories, models.

**MCOM 7316 Ethnic and Alternative Media in America**
This course examines the role and function of ethnic and alternative news organizations in America from historical to contemporary times. Students will consider how ethnic and alternative news organizations and outlets have changed and contributed to society, as well as obstacles facing these organizations. Students will explore similarities and differences between mainstream news organizations and alternative media outlets.

**MCOM 7320 Literature of Journalism**
Review and assessment of writings, primarily books, concerning various aspects of journalism to provide a familiarization with and understanding of the body of literature pertaining to the discipline.

**MCOM 7325 The Press and Propaganda**
Interaction between press and institutionalized propaganda; theory, practice of persuasive campaigns created and implemented by political, religious, commercial institutions; strategy and media use for creating public opinions and issues, candidates, products, policies.

**MCOM 7330 Seminar in Mass Communication Law**
Prerequisite: MCOM 4352/5352 or equivalent. Pinpoints research procedures and provides incentive, direction, and a forum for examining topics in mass communication law; treats specific problems by examining statutory confines and court interpretations.
MCOM 7331 Internet Policy and Regulation
This course is an overview of the policies and regulation that govern the Internet as a mass medium. It focuses on areas of active discussions among mass media practitioners, legislators, policy makers, the law courts, scholars and the American people.

MCOM 7335 Seminar in Journalism Quantitative Research
Prerequisite: MCOM 7310 or equivalent. Methodological approaches to the study of mass communication structure, processes, effects; emphasis on survey and experimental research procedures and content analysis.

MCOM 7337 Media Criticism
This course adopts a qualitative methodological approach to research in the framework of humanities, popular arts, critical theory, and cultural studies. It examines the social, cultural, and informational dimensions of mass media – the structures of mass media industries, and the mass media industries as culture industries.

MCOM 7340 Seminar in Journalism History
Historiography as applied in the field of journalism history; analysis of and practice in the scholarly writing of journalism history; selected topics in journalism history.

MCOM 7350 PR for 21st Century Non-Profits
Three credits. Study of public relations strategic media planning with special emphasis on the application of public relations principles as they apply to non-profit organizations. Includes student project.

MCOM 7360 Editorial Writing
Media’s comment function, policies, problems.

MCOM 7365 New Media Writing and Producing
Students in this course will learn how to use various multimedia tools to write and produce journalistic content for various online media venues.

MCOM 7370 New Media Publishing
This course involves learning how to design and publish multimedia mass communication content on the Internet. It is a lecture, lab and project based course that focuses on the principles of convergent journalism and the processes of responsive design and publishing mass media content on the Internet.

MCOM 7398 Professional Project
Under the direction of their supervisory committees students will use this course to complete professional-quality mass communication projects that integrate and synthesize their graduate experiences in the Professional Journalism/Public Relations Option. These projects will demonstrate the student’s mastery of the discipline and provide the framework for future work in the field.
MCOM 8100, 8200, 8300, 8400, 8500, 8600 Thesis
Prerequisite: successful completion of comprehensive examination. A scholarly work, based on research that advances an original point of view in the discipline of journalism. Variable credit of one to six hours.
Non-Profit Management

Ross Hall, 6th Floor, (501) 569-3211

Graduate Certificate in Non-Profit Management

The graduate certificate in Nonprofit Management is designed for both in-service students currently employed in nonprofit organizations and pre-service students interested in entering the nonprofit sector. The curriculum combines scholarly knowledge with practical applications. Classes are taught by experienced faculty from a variety of fields including public administration, social work, communication, and finance, and by experienced professionals in the local nonprofit community.

Courses present trends affecting nonprofits and businesses alike and how to use these for the successful management of nonprofit organizations. Learning with managers from other nonprofit organizations, students are able to develop their personal styles of management while gaining knowledge and skills in topics outside their immediate job areas for further professional growth. For more information, see the website.

Admission Requirements

- Baccalaureate degree from a regionally accredited institution and ability to meet the general admission standards of the UALR Graduate School.
- Preference is given to persons who are currently employed in a nonprofit organization
- An essay demonstrating students’ background and interest
- Two letters of reference relevant to the application

Program Requirements

The graduate certificate in Nonprofit Management requires 18 graduate credit hours, including 6 required hours and 12 approved elective hours. In the Capstone Course, students prepare and present a final project.

Required Courses

PADM 7336 Nonprofit Organization Management (Three hours)
PADM 7374 Capstone Project (Three hours)

Electives

Elective courses must be approved by the program coordinator and cover topics in:
- Financial management
- Fundraising
- Human resources (including volunteer management)
- Public relations and marketing
- Program planning and evaluation

Current approved elective courses include:

PADM 7313 Public Human Resource Management
PADM 7324 Financial Management for Nonprofit Organizations
PADM 7326 Public Organizational Networks for Nonprofits
PADM 7331 Financial Management for Nonprofit Organizations
PADM 7334 Grant Writing and Fundraising
PADM 7331 Human Resources/ Volunteer Management
PADM 7346 Current Issues in Public and Nonprofit Management
PADM 7380 Public Program Evaluation
MCOM 7350 Public Relations for the 21st Century Nonprofits
SOWK 8159/8259/ Evaluation Research I & II

Graduation Requirements

- Cumulative GPA of at least 3.0 on an approved program of study as outlined above.
- Successfully passing of both the written capstone project and the oral presentation of the project.

Note: Course descriptions of the PADM courses may be found in the Public Administration, MCOM courses may be found in the Mass Communications, and SOWK may be found in the Social Work portions of this catalog.
Master of Arts in Professional and Technical Writing

The Master of Arts in Professional and Technical Writing (PTW) program provides extensive and intensive study of and practice in writing designed to prepare students for careers in business and government, publishing, and education. It focuses on developing individual abilities and on helping students become articulate, informed scholars and writers able to adapt to a wide range of situations and tasks. The program offers two concentrations, one technical and the other nonfiction. The technical concentration focuses on writing for industry, science, business, and government. The nonfiction concentration focuses on composition and rhetorical theory, essay and extended nonfiction writing, and a general application of writing skills, including the teaching of writing.

The Little Rock Writing Project, housed in the Department of Rhetoric and Writing, offers PTW students opportunities to work with teachers and administrators from all grade levels to improve writing education in Arkansas schools. It offers graduate courses, writing and special topics workshops, and other services to teachers and students across the state.

As part of a university community that acknowledges the importance of assessment, we gather assessment data through student portfolios and exit surveys, employer surveys, doctoral student progress reports, and faculty idea exchanges. We then use these findings to improve our programs. Visit the program’s website for more information.

Admission Requirements

- Online application to Graduate School.
- Baccalaureate degree from a regionally accredited institution with a cumulative grade point average of 3.0 or greater (4.0 scale) or 3.0 or greater in the last 60 hours
- Statement of purpose, explaining applicant’s interest and background in writing and outlining the applicant’s expectations and goals with regard to the program
- Current résumé
- Writing portfolio indicative of applicant’s range, ability, interests, and style (may contain work completed in college courses, writing from the workplace, and/or freelance work): three to four pieces
- Three letters of recommendation
Online application and official transcripts should be sent to the Graduate School. Statement of purpose, resume, portfolio, and letters should be sent to the PTW program coordinator, Department of Rhetoric and Writing. Applicants are strongly urged to contact the coordinator before completing the application process.

Graduate Assistantships

A limited number of graduate assistantships, both teaching and non-teaching, are available each year. Most students who are granted assistantships teach 1-2 sections of first-year composition or are involved in training tutors and administration in the University Writing Center. Students who wish to apply for teaching assistantships must first complete RHET 7310 Composition Theory. Students who wish to apply for Writing Center assistantships must have served at least one semester as a writing center tutor during their undergraduate degree, or they must first complete at least one semester of RHET 7360 Writing Center Internship. The number of non-teaching assistantships varies each year; these positions are highly competitive, and they are awarded in part based on the student’s particular skill set. Contact the program coordinator for more information.

Program Requirements

The PTW program offers two options for completing the master’s degree: a 36-hour option that culminates in a thesis project and a 42-hour option that culminates in a portfolio defense. Students will chose which option to complete in consultation with the program’s graduate coordinator, as well as with the student’s portfolio mentor (a faculty member assigned to assist with the student’s development as a writer when the student is admitted to the program). Students are required to meet with both their portfolio mentor and the graduate coordinator at least once per semester for advising and review of the student’s progress in the program.

Thesis Option

The thesis option for the Master of Arts in Professional and Technical Writing requires 9 hours of core courses, 15 hours of concentration courses, 6 hours in a cognate area, and 6 final project hours. All students are welcome to select the thesis option, but it is especially recommended for students who already have a bachelor’s degree in writing (or a closely related area) and for students who want to use their master’s course work as preparation for pursuing a Ph.D.

Core Courses

Core courses introduce students to important areas of theory necessary to the successful completion of the degree. Students must complete all nine hours of core courses. Substitution courses, independent studies, and transfer hours are not acceptable for PTW core courses. The
required courses include the following:

RHET 7300 Research Methods
RHET 7311 Rhetorical Theory
Choose one: RHET 7310 Composition Theory, RHET 7312 Language Theory, or RHET 7313 Theory of Technical Communication

Concentration Courses

Concentration hours allow students to develop a specialization within the program. Students typically choose to complete 15 hours from the technical writing concentration, the nonfiction writing concentration, or the editing concentration. With permission from the program coordinator, students may mix courses from among the concentrations if the course selection is appropriate to the student’s career goals. No more than three hours total of independent study or internship credit may be counted toward a student’s concentration hours.

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<thead>
<tr>
<th>Technical Writing Concentration Courses</th>
<th>Rh 5318 Writing Auto/Biography</th>
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<tbody>
<tr>
<td>RHET 5304 Technical Style and Editing</td>
<td>RHET 5321 Editing for Publication</td>
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<td>RHET 7350 Independent Study</td>
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<td>RHET 7360 Internship/Practicum 1</td>
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Nonfiction Writing Concentration Courses

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>RHET 5202</td>
<td>Teaching Writing in Secondary Schools</td>
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<tr>
<td>RHET 5301</td>
<td>Theories of Rhetoric and Writing</td>
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<tr>
<td>RHET 5305</td>
<td>Document Design</td>
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<tr>
<td>RHET 5315</td>
<td>Advanced Persuasive Writing</td>
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<tr>
<td>RHET 5317</td>
<td>Advanced Nonfiction Writing</td>
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</tbody>
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1. An internship for a company, nonprofit, or government organization

Cognate Courses (Six hours)

Cognate hours are designed to allow writers to develop areas of additional knowledge and experience that support their PTW concentrations. Students in the technical writing and nonfiction writing concentrations may choose to develop a cognate area outside the Rhetoric and Writing Department if they wish; some popular options include cognate courses in speech communication, linguistics, literature, creative writing, mass communication, management, political science, psychology, computer science, and graphic design. Students in technical writing and nonfiction writing concentrations may also choose cognate courses from other areas of the PTW program, including internship and independent study courses. Cognate hours must be chosen from graduate-level courses. Graduate courses from other institutions are acceptable for transfer as cognate hours; students should inform the graduate coordinator immediately.

Students in the editing concentration are required to fill their cognate hours with six hours of editing internship credit by taking a combination of RHET 7161, 7261, and/or 7361. Editing internship hours must be approved in advance by faculty members coordinating the editing concentration.

Final Project Courses (Six hours)

Students choosing the thesis option must complete both RHET 7390 (the thesis proposal course) and RHET 7391 (the thesis completion course). These courses allow students to design, propose, and complete extended writing projects appropriate to their concentrations and career goals. A PTW thesis may take form of a traditional academic research project, or it may take the form of an extended, substantial applied project with an accompanying researched analytical essay.

Portfolio Option (42 hours)

The portfolio option for the M.A. in Professional and Technical Writing requires 12 hours of core
courses, 15 hours of concentration courses, six hours in cognate area, and 12 additional hours of coursework selected by the student and his or her portfolio mentor. All students are welcome to select the portfolio option, but it is especially recommended for students who completed bachelor’s degrees in disciplines other than writing, English, or journalism. The portfolio option is also recommended for students who have chosen the editing concentration, as it enables them to choose more electives than allowed under thesis options.

Required Coursework

The requirements for the core courses, concentration courses, and cognate courses are identical to the requirements for the thesis option (see the thesis option requirements above for more details). After completing these courses, the student will consult with his or her portfolio mentor to choose four additional courses that will broaden the student’s range for writing abilities, strengthen his or her professional skill set, and produce a portfolio of writing and/or editing samples that will help students attain the next logical step in their career paths. These courses may be chosen from within the Rhetoric and Writing Department or from outside the department, depending on the needs and goals of the individual student. Portfolio option students may not count more than nine total credit hours of internship, practicum, or independent study credit toward their degree.

If a student completes the core, concentration courses, and cognate hours and remains undecided about which degree option to pursue, the student may take RHET 7390 and count it toward either option. If a student completes RHET 7390 and wishes to undertake the thesis project proposed in that class, he or she will then register for RHET 7391 and complete the thesis option. If the student decides after completing RHET 7390 that he or she does not want to undertake the proposed thesis project, he or she may count RHET 7390 toward the 12 hours of additional coursework required for the portfolio option.

Portfolio Completion and Defense

Portfolio option students must consult with their portfolio mentor at the beginning of their final semester of coursework to choose two other faculty members to serve on the student’s portfolio committee. The student will then work with the committee to select five-six written pieces from the student’s coursework in the program and then revise those pieces to a level of professionalism appropriate for publication or for use in a corporate, nonprofit, or governmental organization. When all three members of the committee agree that the student’s writing samples have reached an appropriate level of professionalism the student must schedule a portfolio defense (a public presentation of the finished portfolio with time for questions from the student’s committee and audience members). If the committee members agree that the student’s performance at the defense is satisfactory, they will sign the student’s portfolio defense paperwork certifying that the student has completed all requirements for the degree.

Thesis Option Graduation Requirements
- Cumulative GPA of at least 3.0 on a minimum of 36 hours of coursework (as outlined above)
- Successful completion and defense of thesis project

Portfolio Option Graduation Requirements
- Cumulative GPA of at least 3.0 on a minimum of 42 hours of coursework (as outlined above)
- Successful completion and defense of master’s portfolio

Courses in Rhetoric and Writing

**RHET 5202 Teaching Writing in Secondary Schools**
Prerequisite: graduate standing. This is a methods course that is team-taught by the English and Rhetoric and Writing departments. The topics include making classroom presentations, managing small-group work, responding to student writing, evaluating and using secondary school literature and composition textbooks, and learning approaches to teaching literature and writing. It should be taken in conjunction with English 5202.

**RHET 5301 Theories of Rhetoric and Writing**
Prerequisite: graduate standing. An introduction to the formal study of classical and contemporary theories of rhetoric and writing. Emphasis on the practical understanding and application of techniques of rhetorical analysis and criticism.

**RHET 5304 Technical Style and Editing**
Prerequisites: graduate standing. Studies the nature of technical communication and its editing needs. Practice in editing for correctness, consistency, accuracy, and completeness—accomplished by establishing levels of edit, making multiple passes, and setting up/keeping style sheets. Major project for “real-world” client gives students opportunity to put into practice what they’ve learned. Students with credit for RHET 4304 cannot take RHET 5304 for additional credit. Three credit hours.

**RHET 5305 Document Design**
Prerequisite: graduate standing. Study and practice of the use of visual elements in technical communication. Emphasis on typography, page layout, data displays, pictorial communication, and usability testing for both print and online documents.

**RHET 5306 Writing for Business and Government**
Prerequisite: graduate standing. Theory of and practice in writing for business and government organizations; includes writing strategies, appropriate diction, report formats.

**RHET 5307 Writing Software Documentation**
Prerequisite: graduate standing. Study and practice of writing documentation for computer software, including printed manuals, tutorials, reference guides, and online help systems.
Emphasis on analyzing prospective users and their tasks, interviewing subject matter experts, developing help for different levels of users, writing user-friendly text, editing documentation for style and clarity, and working on a documentation team. Intensive practice with RoboHELP HTML software for composing online help.

**RHET 5315 Advanced Persuasive Writing**  
Prerequisite: graduate standing. Intensive study of classical and new rhetorics. Emphasis on solving rhetorical problems and producing a variety of persuasive texts.

**RHET 5317 Advanced Nonfiction Writing**  
Prerequisite: graduate standing. Writing to explore, investigate, explain; includes writing a variety of professional, scholarly, and popular essays.

**RHET 5318 Writing Auto/Biography**  
Prerequisite: graduate standing. A workshop-centered course focused on developing extended nonfiction essays chronicling events in one’s own life or the lives of others.

**RHET 5321 Editing for Publication**  
Prerequisite: graduate standing. A hands-on experience in pre-production editing for publication. Includes study of the editing process, manuscript acquisition, the peer review process, manuscript editing, editorial correspondence, and pre-production manuscript preparation.

**RHET 5322 Advanced Editing**  
Prerequisite: RHET 4/5304 or RHET 4/5321, or comparable skills as determined by the instructor. Topics include editing graphics, illustrations, and document design; editing for comprehension and organization; editing text electronically, applying styles to text, and creating templates; studying legal and ethical issues in editing; acquiring project management and effective teamwork skills. Students work with actual clients and their document needs. Three credit hours.

**RHET 5323 Production for Editors**  
Prerequisite: graduate standing or consent of the instructor. Designed to help future editors learn about and participate in the production of a book length collection of nonfiction essays. Class focuses on creation of table of contents, arrangement of essays into thematic sequences, book layout and design using high-end desktop publishing software, final proofreading, page proofing, and work with printers. Students with credit for RHET 4323 may take RHET 5323 for graduate credit. Three credit hours.

**RHET 5325 Legal Writing, Reasoning, and Argument**  
Prerequisite: graduate standing. Designed for all majors, particularly for pre-law students and writers interested in the discourse of the law. Students will read a variety of judicial decisions on current issues such as freedom of speech and complete several relatively short assignments focusing on legal reasoning and argument. Students will also learn how to find information on legal decisions and issues. Graduate students are encouraged to complete an introductory course in persuasive writing and/or rhetoric before taking this course.
RHET 5345 Topics in Persuasive Writing
Prerequisite: graduate standing. Theory and practice of persuasion with topics varying each semester. May be repeated for credit when topic varies.

RHET 5346 Topics in Technical Communication
Prerequisite: graduate standing. Theory and practice of technical communication; topics vary each semester. May be repeated for credit when topic varies.

RHET 5347 Topics in Nonfiction Writing
Prerequisite: graduate standing. Theory and practice of nonfiction writing with topics varying each semester. May be repeated for credit when topic varies.

RHET 5371 Writing on the Web
Prerequisite: graduate standing. An introduction to the rhetorical aspects of web design and construction that emphasizes audience(s), purpose(s), and accessibility issues such as website navigation, readability, visual design, and ADA compliance.

RHET 5372 Usability Testing and Design
Prerequisite: graduate standing. An introduction to principles of user experience (UX) design, usability, and usability testing in the context of new media. Topics covered include interaction design, audience and requirements analysis, prototyping, document aesthetics, and usability testing procedures. May be taken for credit by students who have taken RHET 4372 as undergraduates. No programming experience required.

RHET 5375 Grant Writing
Prerequisite: graduate standing. Survey, theory, and practice of grant writing (solicited and non-solicited) and the philanthropic sector. Topics include, but are not limited to, finding and researching a foundation, finding and using resources for each stage of the grant writing process, developing a problem statement, creating objectives and goals, creating a budget, and working with foundations.

RHET 7150, 7250, 7350 Independent Study
Prerequisites: graduate standing and consent of instructor. Intensive research and writing under faculty supervision on an approved topic in an area not covered in regularly scheduled course offerings; written proposal and final product required. No more than three hours may count toward concentration requirements. Additional hours may fulfill cognate requirements. May be repeated once for degree credit.

RHET 7161, 7261, 7361 Editing Internship
Prerequisite: graduate standing, recommendation of the departmental editing track coordinator. Hands-on editing experience in a professional workplace. Work hours, activities, and responsibilities must be specified in a written agreement between employer and the student in consultation with the editing track coordinator. Credit hours may vary (one to three). May be repeated for credit.
RHET 7300 Introduction to Research Methods
Prerequisite: graduate standing. An introductory course in research methods used to study writing in the classroom and workplace; quantitative and qualitative design; ethics of human subject research.

RHET 7310 Composition Theory
Prerequisite: graduate standing. Contemporary research and theory on composing processes; includes the text itself, writing behavior, relationship between cognition and writing, writing contexts and communities, development of the individual writer; requires extensive research.

RHET 7311 Rhetorical Theory
Prerequisite: graduate standing. Nature, extent, practice of rhetoric; emphasis on necessity of integrating a solid understanding of rhetorical theory with extensive writing in a variety of modes for a variety of audiences and reasons.

RHET 7312 Language Theory
Prerequisite: graduate standing. Research and theory concerning acquisition and nature of functional language competence, including oral and written language and the movement from oral to written discourse.

RHET 7313 Theory of Technical Communication
Prerequisite: graduate standing. Research and theory concerning writing in professional settings; includes study of processes and products of writing in the workplace, theories informing technical communication, influence of new technologies, implications for pedagogy and practice. Requires extensive research and writing.

RHET 7320 Working with Writers
Prerequisite: graduate standing. Study of a variety of writing processes, strategies, skills for writers. Emphasis on practical applications for writers and writing teachers in academic, work, and other settings.

RHET 7330 Topics in Nonfiction Writing
Prerequisite: graduate standing. Advanced study of theoretical, practical, or pedagogical topics related to nonfiction writing. May be repeated for credit when topic varies.

RHET 7331 Topics in the Essay
Prerequisite: graduate standing. Advanced study of theoretical, practical, or pedagogical topics related to the essay. May be repeated for credit when topic varies.

RHET 7332 Topics in Extended Nonfiction
Prerequisite: graduate standing. Advanced study of theoretical, practical, or pedagogical topics related to extended nonfiction writing. May be repeated for credit when topic varies.

RHET 7333 Topics in Editing and Publishing
Prerequisite: graduate standing. May include topics such as Editing for Global Audiences; Intellectual Property, Authorship, and Copyright; History of Printing and the Book; Freelance Editing; and Research and Fact Checking. May be repeated for credit when topic varies. Three credit hours.

**RHET 7335 Topics in Rhetoric**
Prerequisite: graduate standing. Advanced study of theoretical, practical, or pedagogical topics related to rhetoric. May be repeated for credit when topic varies.

**RHET 7336 Technology of the Book**
This course presents an overview of the history of book printing and publishing technologies from 1450 to the present. Students will explore the implications of different publishing technologies for literacy, learning, and civic participation, focusing particularly on current debates about the shift from print to digital publishing. Students will evaluate changes in the responsibilities of authors, editors, and publishers as they attempt to answer the following questions: What does the future of the book look like? Will print and digital books continue to co-exist? Who will control the publishing process and profit from it?

**RHET 7340 Topics in Technical, Business, and Government Writing**
Prerequisite: graduate standing. Advanced study of theoretical, practical, or pedagogical topics related to technical communication. May be repeated for credit when topic varies.

**RHET 7360 Internship/Practicum**
Prerequisites: graduate standing, recommendation of the departmental internship/practicum coordinator. Hands-on writing experience in a professional workplace. Work hours, activities, and responsibilities must be specified in a written agreement between the employer and student in consultation with the internship/practicum coordinator. May be repeated for credit.

**RHET 7370 Theory of Computer-Mediated Communication**
Prerequisite: graduate standing. Studies in various theories of computer-mediated communication. Includes areas such as uses and abuses of power online and explorations of writing processes in online environments.

**RHET 7371 Online Writing Instruction**
This course provides instruction in the functional applications related to basic design principles for online writing courses, instructional technology, and online writing pedagogy. Students in this course will study the principles and practices of effective online writing instruction.

**RHET 7372 Multimedia in Online Writing Instruction**
This course provides instruction in multimedia design to enhance online writing instruction. The course includes an analysis of effective instructional technologies to promote active learning and how to assess multimedia projects. Students in this course will produce multimedia materials to supplement online writing instruction and understand how to implement and evaluate effective multimedia assignment for online writing classrooms.
RHET 7373 Special Topics in Online Writing Instruction
This course provides theory and practice in topics related to online writing instruction, including accessibility, assessment, collaboration, and administration in online writing programs. May be repeated for credit when topic varies.

RHET 7380 Writing and Service Learning
Prerequisite: graduate standing and permission of the instructor. Community service projects involving writing. Initiatives will vary according to community needs and abilities of students. Final reflection paper required. Three hours may be applied to either concentration. May be repeated for cognate credit.

RHET 7390 Thesis Proposal Seminar
Prerequisite: consent of the graduate coordinator. This seminar course prepares students who have chosen the thesis option for the MA in Professional and Technical Writing for the process of researching a thesis topic, writing a thesis proposal, forming a thesis committee, and defending the thesis proposal. Students also produce a web-based portfolio showcasing writing they have completed during their program coursework.

RHET 7391 Thesis Hours
Prerequisite: RHET 7390 and consent of instructor. Students register for the section assigned to their thesis chairperson, working independently under the supervision of their chair and committee members to complete and defend the thesis. Students must successfully pass the thesis defense in order to earn credit for this course. Students who have not passed the thesis defense by the end of the semester must re-enroll for credit until they successfully defend, except during summer semesters.

RHET 7395 Cooperative Education
Prerequisites: graduate standing and recommendation of the departmental cooperative education coordinator. Hands-on writing experience in a professional workplace. Work hours, activities, and responsibilities must be specified in a written agreement between the employer and student in consultation with the cooperative education coordinator and in coordination with the Office of Cooperative Education. May be repeated for credit.

RHET 7399 Writing Research Proposals and Reports
Prerequisite: graduate standing. Reference bibliography methods, research methods, proposal and report writing; includes a research project in an area chosen by the student with a faculty sponsor from the research area responding to the project’s substance and methodology.
Public Administration

Ross Hall, 6th Floor, (501) 569-3211

Master of Public Administration

The Master of Public Administration (MPA) program provides professional management, analytical, and leadership skills and the understanding of public policy issues needed for management and policy positions in national, state, regional, and local governments and the nonprofit sector.

The curriculum combines practical applications and scholarly knowledge to provide an understanding of public management and develop the specific skills needed by governmental and nonprofit managers, analysts, and policy-makers. The program is designed for both in-service and pre-service students and can be tailored to focus on individual professional goals and career areas. For more information, please visit our website.

Admission Requirements

- Baccalaureate degree from an accredited institution with a cumulative grade point average of at least 2.7 (4.0 scale) or 3.0 in the last 60 hours
- The Graduate Record Examination (GRE) or Miller Analogies Test (MAT) is required. Preferred scores on the GRE should be in the range of 153 for the verbal section of the exam and in the range of 148 for quantitative section. Students may also elect to take the MAT; the preferred score on this test is 400.
- Work in other graduate or professional programs will be considered in making admission decisions
- A written statement of educational and career goals (email to coordinator)
- Résumé (email to coordinator)
- Two letters of recommendation (email/mail to coordinator)

Program Requirements

The public administration degree requires 39 graduate credit hours, which includes 24 required hours, 15 approved elective hours, and successful completion of the capstone seminar PADM 7373. Students must maintain a 3.0 GPA for all courses approved for the MPA program. In accordance with the Graduate School policy, students who fall below a 3.0 GPA will have the next 12 credit hours to raise their GPA. Students admitted conditionally must maintain a 3.0 GPA in their first 12 graduate hours of core MPA courses.
Students without professional, managerial, or research experience in public administration are urged to take a three-hour internship (PADM 8301 or PADM 8302). The internship credit is in addition to the 39 hours required for the program. Students considering pursuit of a doctoral degree are encouraged to take a six-hour thesis project (PADM 8000).

**Required Courses**

- PADM 7301 The Profession of Public Administration
- PADM 7303 Public Organization Theory
- PADM 7313 Human Resource Management in the Public Sector
- PADM 7315 Methods in Public Administration
- PADM 7323 Public Financial Administration
- PADM 7332 Politics and Bureaucracy
- PADM 7363 Public Policy Analysis
- PADM 7373 Seminar in Public Administration

**Electives**

- PADM 5341 Seminar in Comparative Public Administration
- PADM 5353 Seminar in Public Budgeting
- PADM 7130 Independent Study (one hour credit)
- PADM 7230 Independent Study (two hours credit)
- PADM 7324 Financial Management for Nonprofit Organizations
- PADM 7326 Public and Organizational Networks for Nonprofits
- PADM 7330 Independent Study (three hours credit)
- PADM 7331 Problems in Public Administration
- PADM 7333 Administrative Leadership and Public Management
- PADM 7334 Grant writing and Fundraising
- PADM 7335 Urban Management
- PADM 7336 Managing the Not-for-Profit Sector
- PADM 7337 Public Organizational Change and Development
- PADM 7338 Public Personnel Problems and Issues
- PADM 7339 State Administration and Reform
- PADM 7340 Ethics in Public Administration
- PADM 7341 Managing Public Disputes
- PADM 7342 Public Revenue Management
- PADM 7343 Organizational Partnerships and Collaboration
- PADM 7345 Urban Management and Community Change
- PADM 7346 Current Issues in Public and Nonprofit Management
- PADM 7353 Seminar in Intergovernmental Management
- PADM 7380 Public Program Evaluation
- PADM 7393 Administrative Law

**Graduation Requirements**
• Successful completion of 39 hours of approved MPA courses with a GPA of at least 3.0,
• Successful completion of the capstone applied project paper, and
• Successful completion of the capstone seminar (PADM 7373).

Graduate Assistantships
A limited number of graduate assistantships may be awarded to students who have regular admission into the MPA program. Contact the program coordinator for more information.

Advanced Standing Program
The advanced standing program allows middle- to upper-level managers who have completed the Certified Public Manager’s program (CPM) to pursue the MPA degree. Students who have completed the CPM must present a certificate that is signed by the appropriate authorities that indicates that all graduation requirements for the CPM have been completed.

Admission requirements
• Baccalaureate degree from an accredited institution with a cumulative grade point average of at least 2.7 (4.0 scale) or 3.0 in the last 60 hours.
• Scores on the GRE of at least a 153 on the verbal section and a 148 on the quantitative section, or 400 on the MAT.

Program Requirements, in addition to those of the regular MPA program
Students admitted to the advanced standing program are required to complete all required courses of the MPA program and nine hours of electives as approved by the MPA coordinator. These students have six hours of elective course work waived in the MPA program.

MPA/JD Concurrent Degree Program
The MPA/JD concurrent degree program is offered with the UALR Bowen School of Law. Students enrolled in the concurrent MPA/JD program may use specified courses to earn cross-credits that may be applied toward the fulfillment of both degrees.

Students must obtain admission to both programs to receive cross-credit. Once admitted, students must submit a Declaration of Intent to Pursue Joint Degrees form, specifying which program they intend to pursue first. This form is available in the MPA program and the School of Law admissions offices. Students are not considered enrolled in the concurrent program until both programs receive a copy of the completed form.

Current MPA program students may enter the concurrent program by gaining admission to the UALR School of Law and submitting a completed Declaration of Intent to Pursue Joint Degrees
form to each program prior to completing the MPA. Students currently pursuing a JD must apply for admission to the MPA program prior to receiving the JD. These students are not required to meet the GRE or MAT admission requirements for the MPA program. LSAT scores are used in lieu of those test scores.

Once students are admitted to both programs and the concurrent degree forms are on file in both offices, cross-credit for courses is earned according to the following conditions:

- Minimum grade of C in JD program cross-credit courses (up to 15 hours)
- Minimum grade of B in MPA program cross-credit courses (up to 12 hours)

**MPA Courses Approved for Credit in the JD Program**

PADM 7333 Administrative Leadership and Public Management
PADM 7334 Grant Writing and Fundraising
PADM 7335 Urban Management
PADM 7339 State Administration and Reform
PADM 7340 Ethics in Public Administration
PADM 7353 Seminar in Intergovernmental Management
PADM 7363 Public Policy Analysis
PADM 7380 Public Program Evaluation
PADM 7385 Seminar in Public Policy

**JD Courses Approved for Credit in the MPA Program**

LAW 6203 Alternative Dispute Resolution
LAW 6249 Workers Compensation
LAW 6256/6393 Civil Liberties
LAW 6257/6300 Communications Law
LAW 6259 Correctional Law
LAW 6269 Employment Law
LAW 6279 State & Local Taxation
LAW 6283/6387 Health Law
LAW 6300 Environmental Law
LAW 6361 Employment Discrimination
LAW 6371 Labor Law
LAW 6372 Land Use
LAW 6374 Legislation
LAW 6375 Local Government
LAW 6378 Poverty Law
LAW 6399 Disability Law
LAW 6404 Mediation Clinic

Courses in Public Administration
PADM 5341 Seminar in Comparative Public Administration (Elective)
Similarities, differences in bureaucratic structures, processes; analysis of organization, staffing, role of administrative systems in contrasting social, cultural contexts of the western, nonwestern worlds.

PADM 5353 Seminar in Public Budgeting (Elective)
Budgeting theory, practice; includes budgeting as allocations, process, games, rituals, history, politics; institutions, their roles in budgeting; current issues such as uncontrollability, balanced budgets, variance budgeting.

PADM 7130/ PADM 7230/ PADM 7330 Independent Study in Public Administration (Elective)
The independent study is given under the direction of a faculty member; course credit can vary from 1 to three credit hours depending on the workload requirements. Students take such courses to engage in specific topic of interest (which is usually not available through regular offerings), or participate in research projects for governments and non-profit agencies. A final written report is required. No more than six hours may count as electives toward degree.

PADM 7301 The Profession of Public Administration (Required)
Introduction to the discipline of public administration covers historical development of public administration, the relationship between politics and administration, conflicting public values, defining the public interest and the appropriate level of administrative discretion, as well as professionalism, the ASPA Code of Ethics, career planning for public service, and major sources of information for professional research. Students should enroll in The Profession of Public Administration course in the first semester they are in the MPA program.

PADM 7303 Public Organization Theory (Required)
Theory, research of complex organizations, their management, administration; relevance, application of the approaches in terms of design, structure, function, processes, their interdependencies.

PADM 7313 Human Resource Management in the Public Sector
Policies, practices, issues of managing the human resource function in public organizations.

PADM 7315 Methods in Public Administration (Required)
Gathering, analyzing data; includes research design, measurement, sampling, survey and evaluation research, coding, scale and index measurement, univariate, bivariate, and multivariate analysis. Students must complete the Methods of Public Administration course with a minimum grade of C before being able to enroll in 7363 Public Policy Analysis.

PADM 7323 Public Financial Administration (Required)
Policies, concepts, practice, and analysis of public financial management issues and practices; introduction to the principles of public finance and the skills necessary for sound management of public sector financial resources. These principles include public budgeting, debt, investments,
forecasting, tax administration, and intergovernmental fiscal transfers.

**PADM 7324 Financial Management for Nonprofit Organizations (Elective)**
This course is designed to provide students with an understanding of funding mechanisms, accounting, and federal reporting requirements for nonprofit organizations. Topics focus on nonprofit accounting, financial resource acquisition, budgeting, financial management, control and transparency in nonprofit organizations.

**PADM 7326 Public and Organizational Networks for Nonprofits (Elective)**
This course will discuss how nonprofit organizations can cultivate and strategically utilize relationships with government agencies, corporations, volunteer networks, and the general public. Both traditional outreach approaches and new formats, including electronic and social media, will be covered.

**PADM 7331 Problems in Public Administration (Elective)**
Seminar on selected topics.

**PADM 7332 Politics and Bureaucracy (Required)**
Relationship of politics and administration; reference to the influence of legislative bodies, parties, interest groups, other forces on bureaucracy, formation and execution of public policy.

**PADM 7333 Administrative Leadership and Public Management (Elective)**
Theory, practice; distinctive challenges facing managers of public organizations; includes political context, effective leadership styles, building and maintaining motivated organizations, application of successful management techniques.

**PADM 7334 Grant Writing and Fundraising (Elective)**
Practical, hands-on study of the concepts, strategies, and techniques of resource development in public and not-for-profit organizations; emphasis on formulation of needs and capacity studies, organization of goals and objectives, budget preparation, volunteer coordination, and outcomes evaluation.

**PADM 7335 Urban Management (Elective)**
Administration of urban governments in context of intergovernmental relations, limited resources, political compromise, competing citizen demands; emphasis on balancing economy and efficiency with equity concerns, especially in key policy decisions relating to quality of urban life.

**PADM 7336 Managing the Not-for-Profit Sector (Elective)**
Management issues unique to nonprofit sector; hands-on use of real-world examples, problems through selected readings, special projects; attention to managing volunteers, fundraising.

**PADM 7337 Public Organizational Change and Development (Elective)**
Theories, concepts; emphasis on applications to practical administrative problems.
**PADM 7338 Public Personnel Problems and Issues (Elective)**
Topical problems, issues from operational, theoretical perspectives; emphasis on political, legal, economic, social, environmental forces that shape the human resource function in public agencies.

**PADM 7339 State Administration and Reform (Elective)**
Specialized needs of managing, reforming state government from comparative framework; emphasis on Arkansas.

**PADM 7340 Ethics in Public Administration (Elective)**
Public managers today face increasingly complex ethical dilemmas, often having to weigh personal and professional values against current public opinion and the law. This course examines some of these inherent conflicts through the use of case studies to help provide a framework and process for resolving ethical issues in the public sector.

**PADM 7341 Managing Public Disputes (Elective)**
Prerequisites: consent of instructor. Covers the knowledge and skills necessary for effective management of complex multi-party disputes about public issues such as land use and delivery of services. Examination of principles for managing conflict in the public sector; explores effective methods for analyzing and framing multi-party conflicts; and provides step-by-step procedures for reaching and implementing agreements.

**PADM 7342 Public Revenue Management (Elective)**
This course is a practical study of concepts and techniques used to manage public funds from a public manager’s perspective. Reading material, class discussions, and practical exercises will emphasize public funds accounting, internal revenue control, investing, and financial statements.

**PADM 7343 Organizational Partnerships and Collaboration (Elective)**
Increasingly, managers, employees, and volunteers from all walks of life, in the public, nonprofit, private sectors are called upon to work in collaborative environment. Reading material, class discussions, and practical exercises will focus on how public and nonprofit managers can best facilitate production and change in such an environment.

**PADM 7345 Urban Management and Community Change (Elective)**
Project-driven study of urban government leadership and management in the context of community systems and collaboration. Focus on issues of regional cooperation, planning and service delivery, urban and suburban governments, and neighborhood and community development.

**PADM 7353 Seminar in Intergovernmental Management (Elective)**
Selected aspects, such as relations between levels of government, American federalism, federal fiscal relations, comparative administration, and emerging trends in intergovernmental relations.

**PADM 7363 Public Policy Analysis (Required)**
Prerequisite: PADM 7315. Public policy evaluation with an emphasis on developing future policies using quantitative, qualitative techniques; includes research design, computer applications, evaluation research, and substantive policy.

**PADM 7373 Seminar in Public Administration (Required)**
Prerequisite: 30 hours approved coursework toward MPA degree with a minimum of 18 hours of core courses completed and a 3.0 GPA for these approved MPA courses. Analysis, linkage of theories, concepts in public administration, policy; emphasis on applying research to practice of public administration.

**PADM 7380 Public Program Evaluation (Elective)**
Prerequisite: consent of instructor. Techniques for evaluating how well public programs work and what sort of research is most helpful to managers who want to improve them; formal research design, process evaluations, and impact evaluations; final project requires the evaluation of public or non-profit program.

**PADM 7385 Seminar in Public Policy (Elective)**
Public sector theories; techniques for analyzing policies; various substantive fields that may include health, energy, environment, other policy-making areas.

**PADM 7393 Administrative Law (Elective)**
Legal aspects of the administrative process, effect of legal principles, processes on administrative decision making; emphasis on limitation of administrative discretion, judicial review of administrative decisions.

**PADM 8000 Thesis in Public Administration (Elective)**
Prerequisites: 24 graduate hours; consent of coordinator. Preparation of a thesis demonstrating scholarship on some aspect of public administration, normally in-depth treatment of an applied management concern; must be approved by a thesis committee (chairperson and two faculty members selected by student with coordinator’s approval). Variable credit of one to six hours. Concurrent enrollment in final three to six hours with coordinator’s approval.

**PADM 8301 Internship I in Public Administration (Optional)**
Prerequisites: 30 graduate hours; consent of coordinator. (For students with no public service background) Practical, first-hand experience in government or nonprofit sector; usually requires four to six months full-time work in appropriate position, management paper reflecting professional and scholarly development.

**PADM 8302 Internship II in Public Administration (Optional)**
Prerequisites: 30 graduate hours; consent of coordinator. (For students with no public service background) Practical, first-hand experience in government or nonprofit sector; usually requires four to six months full-time work in appropriate position, management paper reflecting professional and scholarly development.
Graduate Certificate in Strategic Communication

This graduate certificate serves mid-career professionals who need to update their skills or re-tool given the job market and changes in the field of mass communication. This program is designed for the mid-career professional who has a bachelor’s degree and:

- Would like to update his or her skills in strategic communication-PR;
- Has been working in journalism or another field and wants to become more familiar with strategic communication-PR;
- Has changing job requirements that make a background in strategic communication-PR desirable; or
- Would like to acquire a background in strategic communication-PR in order to make a possible career change.

Admission Requirements

Students entering this program must have a bachelor’s degree from an accredited institution, and meet remaining requirements for admission to the UALR Graduate School.

Applicants to this certificate program also must fulfill the same application and admission requirements as those pursuing the Masters of Arts in Mass Communication from the School of Mass Communications.

Program Requirements

The graduate certificate in Strategic Communication requires 18 credit hours for completion. The following courses are required:

- MCOM 5380 PR Writing
- MCOM 5381 PR Cases
- MCOM 7350 Public Relations for 21st Century Non-Profits
- SPCH 7350 Seminar in Effective Crisis Communication
- SPCH 7312 Organizational Communication
- Any 7000-level Mass Communication course selected in consultation with student’s adviser.

Graduation Requirements

Cumulative graduate GPA of at least 3.0 on an approved program of study as outlined above.
Clinton School of Public Service

Sturgis Hall, (501) 683-5200

The University of Arkansas Clinton School of Public Service (UACS) was established by the University Board of Trustees on January 29, 2004, as a new academic unit within the University of Arkansas (UA) System. The Master of Public Service (MPS) degree program is accredited through a consortium among the University of Arkansas, Fayetteville (UAF); the University of Arkansas at Little Rock (UALR); and the University of Arkansas for Medical Sciences (UAMS).

Vision of Professional Public Service

- We believe in the right of all individuals, without exclusion, to participate fully and democratically in the social, cultural, economic, and political systems that affect their lives. Therefore, professional public servants must understand, engage, and transform these complex systems to ensure equity, eliminate injustice, and effect positive social change.
- We believe in the right of all individuals to reach their full potential and to embody the spirit of democracy. Therefore, public servants must join with those who are marginalized so they are advocates for bettering their own lives and developing their own communities.
- We believe in moral leadership that includes integrity, compassion, and a commitment to social justice. Therefore, public servants must listen to and learn from diverse groups, compromise and build alliances, and take strategic and decisive action to advance the common good.

Mission

The mission of the University of Arkansas Clinton School of Public Service is to educate and prepare professionals in public service who understand, engage, and transform complex social, cultural, economic, and political systems to ensure equity, challenge oppression, and effect positive social change.

We will realize our mission by:

- Operating at the intersection of theory and practice.
- Establishing, nurturing and maintaining a community of students, scholars, and experienced public servants.
- Creating and sustaining partnerships and alliances with public, for-profit, non-profit, philanthropic, and volunteer sectors.
- Systematically evaluating the School’s effectiveness in fulfilling its mission.

The Campus
The UACS is located in the historic Choctaw Station of the Rock Island Railroad, now part of the William Jefferson Clinton Presidential Center and Park in Little Rock, Arkansas. A generous grant from the Roy and Christine Sturgis Charitable and Educational Trust funded the renovation of the Choctaw Station, and the building was dedicated as Sturgis Hall upon its opening in Fall 2004.

Sturgis Hall has two classrooms fitted with advanced audiovisual technology, a commons, student lounge area, library reading room, administrative and faculty offices, student carrels, and conference areas. UACS has opened additional classrooms and office space in the River Market District of downtown Little Rock. UACS students also enjoy campus privileges at three UA System schools – UAF, UALR, and UAMS. To learn more about the UA System and our parent campuses, please visit the UA System website.

Admission Requirements

A description of the admissions process and all admissions forms are available on the Clinton School website.

Admission decisions for the MPS program will weigh the applicant’s academic background (courses and grades), graduate entrance exam scores, and commitment to community service and civic engagement. The successful applicant will have public service experience before, during, or following undergraduate studies. The UACS recommends, though does not require, that applicants have at least a 2.85 cumulative grade point average in their baccalaureate-level courses. The UACS embraces diversity and encourages applications from all regardless of age, race, color, gender, national or ethnic origin, political or religious affiliation, sexual orientation, or physical ability. The admissions process is self-managed. This means that applicants are responsible for ensuring all required materials are received prior to the stated deadline. This also means that it is the responsibility of applicants to review their applications, as a whole, to ensure applications convey experiences, interests, and strengths. (subsequently forwarded to UACS) is not acceptable.  

In addition to the completed application, please submit the following:

- Three short-answer essays. Please see website for required essay questions. (submit by mail)
- A current résumé or curriculum vita that includes a description of public service experiences (submit by mail)
- Official transcripts for all baccalaureate and any graduate/professional school performance (originals must be sent from awarding institution)
- Graduate admissions test scores. The GRE and MAT (code 6368) and GMAT (code 9575) are acceptable in fulfilling this requirement, and scores should be sent directly to UALR. The LSAT (code 6368) may be used only when applying for the concurrent Juris Doctor/Master of Public Service degree program. Applicants are required to submit a photocopy of the official test score transcript by mail to the Clinton School, as well as submit the scores electronically using the appropriate submission code. Please use the appropriate code, as noted, when reporting scores. Scores more than five-years-old will not be accepted. Students who have completed a graduate degree are not required to submit graduate admissions test scores.
Three letters of recommendation are required: one addressing the applicant’s academic preparation, one focused on the personal characteristics that make the applicant well-suited for graduate education, and one affirming the applicant’s public community service record. All letters of recommendation must be accompanied by a “Letter of Reference” form, completed and signed by the individual writing the recommendation. The form is available for download on the UACS website.

- An application fee of $50 (make check payable to UA Clinton School of Public Service)
- Applicants must also be available for interviews in person or via video conference calls at the discretion of the Admissions Committee.
- In addition to the above requirements, all international applicants, including resident and non-resident aliens, whose native language is not English and who do not have an undergraduate degree from a regionally accredited U.S. college or university, are required to take the Test of English as a Foreign Language (TOEFL) and submit a minimum score of 550 for the paper-based examination or 79 for the internet-based examination. The test must have been taken within the two years immediately preceding the requested year of admission. Before any action is taken on an international application, applicants are required to submit both a photocopy of the official TOEFL test score transcript by mail to the Clinton School, as well as submit an electronic transcript from the Educational Testing Service (use UALR school code: 6368). Submit score transcripts both by mail and electronically. Completed international applications may also be asked to submit a Certificate of Finances prior to receiving an admission decision.
- All students must be enrolled on a full-time basis.

Tuition, Fees and Estimated Costs

Tuition and fees are $400 per semester hour for residents and non-residents; an additional fee of $20 is assessed per credit hour to cover instructional equipment, technology, library services, and other miscellaneous charges. Additional charges may be assessed on the consortium schools (UAF, UALR, UAMS) for student activities, sports and recreational events, parking, housing, health services, and the like. Please visit the UACS website for more information.

Scholarships

The Clinton School awards financial aid in the form of scholarships. The amount awarded varies according to need, merit, and the availability of funds.

Program Requirements

The MPS degree requires 40 credit hours for graduation. 29 credit hours are required from core and elective courses with the remaining 11 from practicum, international, and capstone.

MPS Curriculum (19 hours)

Core Course
CSPS 7115 Professionalism in Public Service (One credit hour)
A career in public service requires a personal dedication that leads to building stronger relationships, stronger communities and a more workable and responsive world. This seminar is designed to help students gain knowledge and experience to further their public service careers in the areas of nonprofit, governmental, political, volunteer or private sector work. The material in this course builds upon the knowledge and skill sets learned in the other courses and compliments the students’ ongoing fieldwork. The seminar will draw upon a wide variety of resources and activities in an effort to enhance the students’ personal and professional growth.

CSPS 7201 Ethical and Legal Dimensions of Public Service (Two credit hours)
Ethical and legal considerations shape every aspect of effective public service. This course will provide an overview of the primary ethical principles and legal concepts that guide difficult decisions in the public realm. Traditional academic study of ethical and legal theory will be combined with practical approaches to problem solving. Students will explore issues of economic, political, and social justice through case studies of current issues. Students will construct cases that are relevant to their own fields and present them to the class, identifying ethical and legal constraints on decision-making and implementation.

CSPS 7223 Foundations of Public Service (Two credit hours)
This course covers the history, contexts and practices of public service. Students will define public service in a global context and reflect on their past and future roles as public servants. The course will explore the various roles public servants play and the various contexts in which they practice public service.

CSPS 7303 Communication and Social (Ex)Change (Three credit hours)
Being an effective public service professional requires having the knowledge and skills to act in situations in positive and productive ways that allow for authentic participation by those who may be affected by policies, processes and actions. This course focuses on the constitutive nature of communication to create and maintain equitable social worlds. Students will explore various theories of democracy, civic participation, and public issue and policy formation, analyze case studies to understand the complexities of creating and maintaining equitable social worlds, and engage in exercises to develop effective facilitation skills.

CSPS 7331 The Theory and Practice of Global Development (Three credit hours)
This course provides an overview of three intersecting institutions, which will be useful when conducting public service in the global south, and democratizing societies. These institutions include the State, the market and civil society. Discussions begin with a lively debate between scholars over what development means and then moves on to explore the theories of why some countries are rich and some poor. The course examines the interventions from colonialism to globalization assessing the efforts of northern states, multi-laterals and non-governmental organizations as they attempt to solve the challenges of poverty, disease, conflict, famine, and gender inequality in the global south.

CSPS 7333 Program Planning and Development (Three credit hours)
This course provides students with analytical tools that enhance their skills in diagnosing problems and formulating solutions within organizations and communities. The underlying premise is that well prepared public service leaders can increase their effectiveness in contributing to the well-being of their communities by equipping themselves with these analytical tools. Instruction will focus on evaluating community assets as a balance to assessing community need. Underlying values of social justice and collaborative problem-solving provide a benchmark for these activities.

**CSPS 7334 Program Evaluation (Three credit hours)**
This course builds on the skills students gain in Program Planning and Development and Field Research in Public Service. The primary objective is for students to learn and apply tools that are frequently used to determine whether public policies and programs at local, national and international levels are achieving their intended objectives. In this course, students learn how to use appropriate research methods to evaluate public and not-for-profit programs and entities (e.g., non-profit organizations, foundations, NGO’s), how to develop strategies for doing evaluation, and how to manage evaluation projects. Prerequisites: CSPS 7333 Program Planning and Development and CSPS 7334 Field Research in Public Service.

**CSPS 7335 Field Research in Public Service (Three credit hours)**
This course introduces students to the concepts and principles of field research and is taught in conjunction with their first semester of Practicum. Topics include the key components of collaborative field research, ethics in field research, developing a research focus and research question, conducting a literature review, gathering data and data management, and analyzing data and reporting.

Social Change Option (Three credit hours)
To earn these credits, students will have the option of several courses related to the dynamics of social change. Current offerings include:

**CSPS 7310 Philanthropy Leadership and the Non-profit Sector (Three credit hours)**
Philanthropic intuitions often aim giving toward major societal issues including environmental justice, quality education, race relations, immigration, health care and public health with the goal of helping individuals and communities in need. More foundations are widening their focus from just meeting needs to building sustainable local change. This course will explore community philanthropy as the giving and sharing from within communities that is characteristic of positive change and lasting development. It will examine the principles, standards and practices of community philanthropy and study the leadership role of foundations and nonprofit organizations in creating social change.

**CSPS 7313 Dynamics and Complexities of Social Change (Three credit hours)**
The purpose of this course is to help you understand the dynamics and complexities of social change processes, in both domestic and international contexts. We focus on the key theoretical undercurrents, strategic frameworks, debates and dilemmas, applications and case studies. Specifically, we examine contemporary praxis in organizing for social change in order to serve the
public good, and reflect on the role of personal change and transformation in making such happen.

Field Service Projects

**CPSP 7240 Practicum I (Two credit hours)**
**CPSP 7340 Practicum II (Three credit hours)**
Prerequisite: Completion of CPSP 7240 with a grade of at least a C. The practicum is a year-long required course in the first year of the MPS degree program. The practicum is a field service course that places students in public service projects where students apply the knowledge and skills they are learning at the School. Field service projects work to address systemic issues identified by organizations such as the Arkansas Community Foundation, the Department of Health and Human Services and non-profit organizations. Students must complete both semesters of the practicum, two credit hours in the fall semester and three credit hours in the spring semester.

**CPSP 7320 Capstone (Three credit hours)**
Prerequisite: Completion of CPSP 7331 with a grade of at least a C. The capstone program is designed to provide students with an opportunity to integrate the knowledge and skills gained from course and field work into an in-depth final project. The capstone is carried out by completing a public service project that builds on the cumulative knowledge gained from experiences at UACS. Students have three semesters to complete Capstone once they enroll in the course.

**CPSP 7330 International Public Service Project (Three credit hours)**
Prerequisite: Grade of at least a C in all completed core courses. The international public service project is designed to provide a practical “hands on” experience in public service outside the U.S. or in a domestic setting with an international focus. The purpose of the project is to provide an opportunity for students to experience some type of public service that stretches the boundaries of their existing cultural and experiential world. Students will be expected to engage in a project that will build on the knowledge and skills developed in the first two semesters of the MPS curriculum. Working within the time frame of the summer session, the student is expected to make a substantial contribution in planning and implementing the project to which he/she is assigned. Three credit hours will be awarded for work completed satisfactorily.

Electives (Six hours)

The student’s faculty advisor will work with the student to choose a group of elective courses that are of interest to the student and that will be appropriate for the student’s future career. Elective courses help develop a specialty or concentration focus and have the potential to significantly sharpen the area of professional expertise. The faculty advisor will help the student concentrate on the overall learning objectives for these courses, integrating them with the practicum and capstone.
Concurrent Degrees

MPS/JD Concurrent Degree

Students at UACS and the UALR Bowen School of Law may pursue the Juris Doctorate (JD) and MPS degrees under a combined degree program which allows cross-credit for courses. The combined degree program offers a potential savings of credit hours in the total credit hours otherwise required for both degrees. A student in the combined degree program must complete all the requirements for the JD degree as specified by the Bowen School of Law and all requirements for the MPS degree as specified by UACS.

MPS/MPH Concurrent Degree

Students at UACS and the UAMS Boozman College of Public Health may pursue the Master of Public Health (MPH) and MPS degrees under a concurrent degree program which allows cross-credit for courses. The concurrent program offers a potential savings of credit hours in the total number of credit hours otherwise required for both degrees. A student in the combined degree program must complete all the requirements for the MPH degree as specified by the Boozman College of Public Health and all requirements for the MPS degree as specified by UACS.

MPS/MBA Concurrent Degree

Students at UACS and the University of Arkansas Sam M. Walton College of Business may pursue the Master of Business Administration (MBA) and MPS degrees under a concurrent degree program. A student in the program must complete all the requirements for the MBA degree as specified by the Walton College and all requirements of the MPS degree as specified by UACS.
Graduate Courses

The following is a listing of all graduate courses. Click on the four-letter code to review the graduate courses within that discipline.

Undergraduate courses are found within the Undergraduate Catalog, Clinton School of Public Service Website, and the Law School Website.

ACCT – Accounting

**ACCT 5381 Legal, Regulatory and Ethical Environment for Accountants**
Prerequisite: MKTG 2380 – Legal Environment of Business (or equivalent) with a grade of C or greater. A comprehensive overview of business law and ethics topics, such as the Uniform Commercial Code, accountant’s liability, government regulation of business, agency, contracts, debtor-creditor relationships, real property, insurance, and other topics covered in the CPA exam. This course is open to all graduate business students, but is not open to students with credit for ACCT 4381.

**ACCT 7100 Accounting Methods and Reports**
Uses of accounting data are taught in this course. The topics covered include financial statements, mechanics of recording, theory, working capital, property and plant, long term debt, owner’s equity, costing of products, control of costs, and non-routine decisions. This is a Foundation-Level course that cannot be used as an elective in any graduate business program. Open only to students in the MBA program and the MS in MIS or Pre-MS in MIS programs.

**ACCT 7302 Accounting Methods and Reports**
Uses of accounting data are taught in this course. The topics covered include financial statements, mechanics of recording, theory, working capital, property and plant, long term debt, owners; equity, costing of products, control of costs, and nonroutine decisions. The curriculum includes case studies to illustrate application of accounting principles and procedures to the decision process. This is a Foundation-Level course that cannot be used as an elective in any graduate business program. Open only to students in the MBA program and the MS in MIS or Pre-MS in MIS programs.

**ACCT 7304 Accounting for Managerial Decision-Making**
Prerequisite: Principles of Accounting I and II (ACCT 2310 and 2330) or ACCT 7100 and passing score on accounting assessment. Course Description: This course provides an overview of financial and managerial accounting as well as an introduction to tax planning. The emphasis will be on how various events and transactions in the life cycle of a business affect the basic accounting equation so that the manager can identify the important accounting issues. The course will look at choice of entity, accrual accounting issues, financial statement analysis and differences between U.S. Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS). In regard to tax planning, this course is intended to fill the gap
between a manager well-trained in finance but unfamiliar with taxes and the tax experts on which the manager will rely. This course will examine the structure of tax codes (state and federal) and how taxes influence the finance decisions the manager will be expected to make (e.g. investments, choice of entity, capital structure, like-kind exchanges, mergers and acquisitions, timing of transactions, etc.).

**ACCT 7305 Analysis of Financial Statements**
Prerequisite: ACCT 7304 with a grade of B or greater. User-oriented analysis of the operating performance of an organization based upon accounting information and related financial statements; emphasizes comparative profitability, liquidity, and operating performance measures; examines statistical techniques and electronic spreadsheets used to analyze and manipulate data. Open to students in the MBA program. This course can not be applied to the Graduate Certificates in Accountancy or Taxation, the MACC or the MST.

**ACCT 7320 Tax Planning for Business Decisions**
Prerequisites: ACCT 3321 with a grade of C or greater. Impact of federal tax laws, regulations on a variety of business decision areas; opportunities for tax planning in those areas. This course is open to all graduate business students.

**ACCT 7330 Managerial Accounting for Information Systems Specialists**
Principles of Accounting I and II (ACCT 2310 and 2330) or ACCT 7100 and passing score on accounting assessment. Application and use of accounting information for managerial decision making in the information technology environment; major topics include cost accumulation systems, cost management systems, planning and control systems, and the use of accounting information in decision making. This course cannot be applied against the graduate certificate and masters programs in accountancy or taxation.

**ACCT 7340 International Accounting**
Prerequisites: ACCT 3311 and ACCT 3312, each with a grade of C or greater. This course examines international financial reporting developments, procedures, and standards (IFRs) with an emphasis on financial statement interpretation and analysis. Specific attention is given to the financial reporting requirements of multinational enterprises operating in a global business environment. Open only to MBA students and students in the graduate accounting and taxation programs.

**ACCT 7355 Research in Federal Taxation**
Prerequisite: ACCT 3321 – Federal Taxation with a grade of C or greater. Methods and tools of tax research as applied to both closed fact and controllable fact cases. Methods of locating and assessing relevant authority on specific tax questions is emphasized. This course is open to all graduate business students, but it cannot be taken by students with credit for ACCT 4323, ACCT 5323, or ACCT 7367.

**ACCT 7356 Federal Corporate Taxation**
Prerequisite: ACCT 3321 (or equivalent); and ACCT 4323 each with a grade of C or greater or
ACCT 7355 with a grade of B or greater. Concurrent enrollment in ACCT 7355 is permitted. Study of federal income taxation provisions affecting the formation, operation, liquidation, acquisition, and reorganization of Subchapter C corporations. There will be an emphasis on research and tax planning. This course is open to all graduate students, but can not be taken by students who have taken ACCT 4322.

**ACCT 7360 Taxation of Pass-Through Entities**
Prerequisite: ACCT 7355 with a grade of B or greater or ACCT 4323 with a grade of C or greater. Concurrent enrollment in ACCT 7355 is permitted. Study of small business entities, emphasis on partnerships, limited liability companies, and S corporations; includes choice, formation, and operation of above and distributions, sales, and exchanges of ownership in interests, and transfers by death. Emphasis on research and tax planning. Open only to MBA students and students in the graduate accounting and taxation programs.

**ACCT 7361 Advanced Topics in Auditing**
Prerequisites: ACCT 3341, 4351, or their equivalent, each with a grade of C or greater. The expansion of the auditing function, including internal auditing, operational auditing, auditing EDP systems, and statistical sampling. SEC requirements, legal and ethical responsibilities, comprehensive review of auditing, and application of accounting research skills. This course is open to MBA students and students in the graduate accounting and taxation programs. It is not open to students with credit for ACCT 5352.

**ACCT 7362 Advanced Topics in Accounting Information Systems**
Prerequisite: ACCT 3341 and 4351 (or equivalents) each with a grade of C or greater. Accounting systems in a database environment; structured systems analysis and other approaches to systems analysis and design; current developments in computerized systems technology; risks and controls in computerized information systems; application of accounting research skills. Open only to MBA students and to students enrolled in graduate accounting and taxation programs.

**ACCT 7363 Accounting Theory and Research**
Prerequisite: ACCT 4351 (or equivalent) with a C or greater. Undergraduate degree in accounting or equivalent. Investigation of the development of accounting theory. Focuses on the nature and development of accounting theory and its relation to the standard setting process. The relationship of accounting theory to the resolution of current issues is examined. Emphasis on accounting research. This course is open to students in all graduate business programs.

**ACCT 7364 Advanced Topics in Managerial Accounting**
Prerequisite: ACCT 3330 and 3341 (or equivalents) with a grade of C or greater. Continuation of managerial accounting. Use of accounting information for planning and control, profit planning and control, cost/volume/profit and incremental analysis, capital budgeting, responsibility reporting and performance evaluation, transfer pricing, quantitative models, and decision simulation. Application of accounting research skills. Open only to MBA students and students in
the graduate accounting and taxation programs.

**ACCT 7365 State and Local Taxation**
Prerequisite: ACCT 7355 with a grade of B or greater or ACCT 4323 with a grade of C or greater. Concurrent enrollment in ACCT 7355 is permitted. The constitutional, statutory, regulatory, and judicial principles affecting state and local taxation of business transactions, with emphasis on Arkansas taxation. Emphasis on research and tax planning. Open only to MBA students and students in the graduate accounting and taxation programs.

**ACCT 7368 Advanced Governmental and Not-for-Profit Accounting**
Prerequisite: ACCT 3361 with a grade of C or greater. This course involves the advanced study of accountability, financial reporting and performance measurement in government and not-for-profit organizations. Accounting principles, rules and procedures are also examined to develop an understanding of the day to day operating activities of government and not-for-profit organizations. Open only to MBA students and students in graduate accounting and taxation programs.

**ACCT 7369 International Taxation**
Prerequisite: 7355 with a B or greater or ACCT 4323 with a C or greater, and ACCT 4322 with a C or greater, or ACCT 7356 with a B or greater. Concurrent enrollment in ACCT 7355 is permitted. U.S. federal taxation of international transactions, e.g., “inbound” transactions (affecting nonresident aliens and foreign corporations) and “outbound” transactions (affecting U.S. persons, business, and investment activities outside the U.S.). Topics include jurisdiction, source of income rules, residency tests, transfer pricing, and tax treaties. In connection with “inbound” transactions, the course will address U.S. taxation of investments, business, U.S. real property investments; and branch profits tax. As to “outbound” transactions, the course will include the foreign tax credit; controlled foreign corporations, foreign currency issues; and other cross-border transactions. Open to MBA students and students in graduate accounting and taxation programs.

**ACCT 7370 Estate and Gift Taxation**
Prerequisite: ACCT 7355 with a grade of B or greater or ACCT 4323 with a grade of C or greater. Concurrent enrollment in ACCT 7355 is permitted. Federal tax implications of wealth transfers as it relates to estate planning, including a review of the alternative ways to hold and to transfer property, during life, at death, or after death; the use of legal devices; acceptance and rejection of gifts; property valuation; generation skipping tax; and the estate tax return. Open only to MBA students and students in the graduate accounting and taxation programs.

**ACCT 7371 Federal Tax Accounting**
Prerequisite: ACCT 7367 or 5323 or 7355 with a grade of B or greater or ACCT 4323 with a grade of C or greater. Concurrent enrollment in ACCT 7355 is permitted. Adoption of changes in accounting periods and methods; income recognition and deduction allowances in connection with cash and accrual methods, interest; OID, time value of money, deferred payments, installment sales, prepaid and contested items, reversals, capitalization, amortization, and depreciation;
inventory accounting; accounting for long term contracts; carryovers; claim of right; tax benefits; conformity between tax and financial reporting. Open only to MBA students and students in the graduate accounting and taxation programs.

**ACCT 7372 Federal Tax Practice and Procedure**
Prerequisite: ACCT 7367 or 5323 or 7355 with a grade of B or greater or ACCT 4323 with a grade of C or greater. Concurrent enrollment in ACCT 7355 is allowed. To gain a general knowledge about the IRS’s organization and the procedures used to administer the Internal Revenue Code, including the rules of practice before the IRS, ethical considerations, statute of limitations, examinations, penalties, appeals, assessments, collections, claims for refund, and some of the basic rules concerning criminal tax fraud. Open only to MBA students and students in graduate accounting and taxation programs.

**ACCT 7199, 7299, & 7399 Independent Study**
Prerequisites: A GPA of at least 3.0, at least 12 graduate credits, and consent of department. Intensive research under faculty supervision on approved topic in an area not covered in depth through regularly scheduled courses; research paper required. Open only to students in graduate accounting and taxation programs.

**ACCT 8208 Legal and Ethical Issues in Business**
Only open to Executive MBA students. Introduction to the framework for doing business in the U.S. legal system. Constitutional principles; crimes affecting business; tort and product liability; contract formation and remedies; intellectual property; environmental regulation and mandates. All topics will address the ethical, social, and political issues that influence the workplace and American society.

**ACCT 8300 Seminar in Current Topics**
Prerequisite: ACCT 4351 with a grade of C or greater, ACCT 5323 with a grade of B or greater, or consent of Department Chair. Topics of current importance and interest in accounting. Open to MBA students and to students in the graduate accounting and taxation programs.

**ACCT 8400 Accounting Information for Decision Making**
Only open to Executive MBA students. Understanding financial statement components; preparing and using financial, managerial, and cost accounting information in making business decisions. Application of basic tax principles to the decision making process is also included.

**ADED – Adult Education**

**ADED 5301 Psychology of Adult Learning**
Prerequisite: program admission or graduate standing and consent of instructor. Research, practices related to adult learning, development; cognitive, behaviorist, humanist adult learning
theories; stage, basic development theories. Offered on demand.

**ADED 5303 Teaching Adults**
Prerequisite: program admission or graduate standing and consent of instructor. Teaching/learning process from planning to presentation; approved practices working with “disadvantaged” adult learners. Offered on demand. (Requires a B or greater)

**ADED 5304 Methods and Materials in Adult Education**
Prerequisite: program admission or graduate standing and consent of instructor. Andragogical methods; emphasis on individual and group learning methods and procedures, selecting materials appropriate for adult learners. Offered on demand.

**ADED 7105, 7205, 7305 Independent Study in Adult Education**
Prerequisites: advanced graduate standing, consent of advisor. Specific problems in adult education. Only three hours can count towards the degree; program students may take up to six hours. Offered on demand.

**ADED 7301 Foundations of Adult Education**
Prerequisite: program admission or graduate standing and consent of instructor. Past developments, present goals and objectives of adult education. Offered on demand.

**ADED 7302 Organization and Administration of Adult Education**
Prerequisite: ADED 7301. Organizational procedures, administrative practices for implementation, maintenance of effective programs. Offered on demand.

**ADED 7303 Program Planning in Adult Education**
Prerequisite: ADED 7301. Models for planning, designing, implementing, evaluating programs. Offered on demand.

**ADED 7304 Teaching Reading to Adults**
Prerequisite: ADED 7301. Methods, materials for teaching reading to adults; emphasis on adult learner’s needs. Offered on demand.

**ADED 7307-7607 Internship**
Prerequisite: 12 program hours. Practical experience in concentration, specialization area; requires at least 40 contact hours for each credit hour. Offered on demand.

**ADED 7308 Seminar**
Prerequisites: ADED 5301, 7301, 7303. Recent adult education research having direct application to adult educators in public schools, continuing education, cooperative education, related agencies, programs. Offered on demand.

ANTH – Anthropology
ANTH 5155 Forensic Anthropology Laboratory
Prerequisite or corequisite: ANTH 5355. Hands-on experience in use of anthropometric, morphological, and statistical techniques employed in age and stature estimation as well as sex and race determination; also includes forensic archaeology, treatment and proper handling of forensic anthropology evidence, and writing a forensic anthropology report.

ANTH 5310 Urban Anthropology
A survey of urbanization throughout the world, with emphasis on urban adaptation of rural migrants and the phenomenon of urbanization in emerging nations.

ANTH 5316 Linguistic Anthropology
Introduction to the subfield of linguistic anthropology. Examines the impact of linguistic structure on culture, socioeconomic factors in linguistic variation, intercultural and intracultural verbal and nonverbal communication. Also examines the theories and methods of descriptive anthropological linguistics applied to non-Indo European languages and introduces the student to structural linguistic analysis. Required for majors.

ANTH 5320 Sociocultural Change
Sociocultural change resulting from contact of acculturation, question of acceptance and rejection, pressures toward change, the role of the individual, appraisal of anthropological information and theory in a changing world.

ANTH 5355 Forensic Anthropology
Application of human variation knowledge to legal matters; emphasis on human skeletal variation; theoretical basis of sex determination, age estimation, and ethnic origin classification based on skeletal characteristics; also includes fire death scene investigation, interval since death, and forensic archaeology.

ANTH 5382 Anthropological Theory
Examines the range of theories used to describe and explain variability in sociocultural phenomena. Explores the organization of particular theories as well as issues that separate divergent theories. Major theoretical orientations to be explored include evolutionism, Marxism, Freudianism, structuralism, structural functionalism, ethnoscience, diffusionism, historical particularism, cultural ecology, sociobiology, and cultural materialism.

ANTH 5398 Special Topics in Anthropology
Selected topics in anthropology.

ANTH 5485 Ethnographic Methods
Lecture, laboratory. Data-gathering methods, analyses in native or ethnic settings.

ANTH 5600 Principles of Archaeological Research
Lecture, laboratory. Methods, theory; Arkansas prehistory, public archaeology.
ANTH 7300 Seminar in Anthropology
Prerequisites: graduate standing and permission of the instructor. Readings in professional literature and extensive discussions under faculty guidance. Course may be repeated for credit.

ANTH 7305 Teaching Internship
Prerequisites: consent of the instructor. Students will assist with the teaching of an undergraduate course. They will have opportunities to present course material, lead activities and review sessions, facilitate discussions, and prepare a syllabus. Three credit hours.

ARED – Art Education

ARED 5194, 5294, 5394 Independent Study in Art Education
Prerequisite: approval of art education advisor, consent of instructor. Research on a subject selected in consultation with the instructor. Variable credit of one to three hours. Offered in fall, spring, and summer.

ARED 5325 Foundations of Art Education
History of art education; emphasis on changing philosophies, theories of learning, subsequent goals and objectives made apparent in curriculum development. Offered in spring.

ARED 7331 Studio Experiences in Art Education
Studio-based art experiences for students of all ages, ability levels; emphasis on individual student’s studio strengths; augmented by curriculum in drawing, painting, printmaking, three-dimensional materials. Offered in spring and summer.

ARED 7332 Curriculum Instruction in Art Education
Past, present curriculum, instruction; includes historical component as foundation for understanding current teaching strategies; various teaching approaches are analyzed and formalized into applicable classroom art experiences. Offered in fall and spring.

ARED 7333 Selected Topics in Art Education
Prerequisite: graduate standing, consent of instructor. Topics may include past, present approaches to curriculum development; special populations; aesthetics; art history, criticism; art and technology; art and society; critical analysis; philosophic reflections on art, art education; others. May be repeated for credit when topic changes. Offered in fall, spring and summer.

ARED 7334 Research Trends in Art Education
Past and present art education research; emphasis on understanding the nature of educational research in art, various research methods, how research translates into practical classroom application; includes review, critique, application, development of research topics. Offered in fall.

ARED 7399 Thesis Project
Prerequisite: 27 graduate hours. Prepare and complete final thesis project. Offered in fall and spring.
ARHA – Art History and Appreciation

Prerequisites for all advanced courses in the history of art: ARHA 2310 for ancient and medieval; ARHA 2311 for all other courses; or consent of instructor. ARHA 2310 must precede ARHA 2311. Upper-level courses are offered no more frequently than once every two years; they are offered on an irregular basis during summer terms.

Each art history credit hour requires three clock hours of work each week. One hour is scheduled in class and the additional two hours are scheduled outside class. The undraped human figure appears as a significant subject throughout much of art history and is evident within the art history curriculum.

ARHA 5110, 5210, 5310 Special Topics in Art History
Individual artists, particular periods, geographic areas, media, especially those not covered by normal course offerings. Content, subtitle, and organization change each time offered. Offered on demand.

ARHA 5300 Studies in the History of Art
Required for art history concentration. Art historical methodology; directed readings, research on topics, selected in consultation with the instructor, to be presented in class. Offered in fall on even years.

ARHA 5302 Art Museum Studies
Policy development, museum administration, staff management, operations funding, budgeting, collection organization, program design. Offered in spring on odd years.

ARHA 5305 Italian Renaissance Art
Painting, architecture, sculpture in Italy from c. 1300 to c. 1600; emphasis on major Florentine, Roman, Venetian artists.

ARHA 5306 Renaissance Art in Northern Europe
Painting, sculpture, architecture, graphic art in Northern Europe (especially Low Countries, France, England) from end of Gothic period through Reformation.

ARHA 5307 18th- and 19th-Century European Art
Painting, architecture, sculpture in 18th-19th-century Europe. Offered in fall on odd years.

ARHA 5308 20th-Century Painting, Sculpture, and Graphic Arts Since 1945
Major artists, movements; emphasis on 1945 to present; importance of new materials, techniques; critic’s role. Offered in fall on even years.
ARHA 5309 A History of Arkansas Architecture
Development of architecture in Arkansas from origins through contemporary period.

ARHA 5315 Modern Architecture
Major developments in European and American architecture from 1900 to present; focus on European from 1900 to 1930, United States from 1930 to 1970; includes technological innovations, current design issues (e.g., preservation, adaptive re-use of historic buildings).

ARHA 5384 Baroque Art
Painting, sculpture, architecture in Northern Europe (Netherlands, France, Spain, Italy) from 1600-1725. Offered in spring on odd years.

ARHA 5387 Late 19th-and Early 20th-Century Art
Painting, sculpture, graphic arts, architecture from Post- Impressionist period until World War II. Offered in spring on even years.

ARHA 7197, 7297, 7397 Special Problems in Art History
Prerequisites: graduate standing, consent of instructor. Content, length varies.

ARHA 7303 Seminar in Modern Architecture
Personalities, theories, styles of specific 18th-, 19th-, and 20th-century architects.

ARHA 7315 Seminar in Italian Renaissance and Baroque Art
Directed reading, research on selected topics in Italian Renaissance, Baroque art.

ARHA 7316 Seminar in Northern European Renaissance and Baroque Art
Directed reading, research on selected topics in Northern European art.

ARHA 7327 Seminar in 19th-Century Art
Directed study, seminar presentations on topics in 19th-century painting, sculpture, architecture.

ARHA 7328 Seminar in 20th-Century Art
Selected problems in 20th-century art.

ARHA 7398 Internship in Museum Studies
Prerequisites: 21 graduate hours, consent of coordinator. Concentrated program of practical experience (paid or volunteer), under professional guidance, with a museum, gallery, or other arts organization; requires a journal of internship activities; final written report. Offered on demand.

ARHA 7399 Thesis
Prerequisite: 24 graduate hours. (Required for art history concentration.) May be repeated once for credit. Offered fall and spring.
Each studio art credit hour requires four clock hours of work each week. Two of these hours are scheduled and the additional hours occur outside of scheduled class time in the open studio workspace. Each studio is scheduled to be open for these additional hours.

The undraped human figure is a significant subject within the studio art curriculum.

**ARST 5115, 5215, 5315 Advanced Problems in Design**
Experimental materials, techniques in two- or three-dimensional design; includes correlation of visual design elements with those of various multidimensional work not usually covered in normal course offerings. Content, subtitle, and organization change each time offered. Offered on demand.

**ARST 7197, 7297, 7397 Special Problems**
Prerequisites: graduate standing; consent of coordinator, instructor. Content, length varies.

**ARST 7311 Graduate Drawing I**
Various drawing media, techniques as resource for expression; philosophical, historical roots of contemporary drawing; students encouraged to pursue drawing that incorporates or is tangential to their major area of study. Offered in fall and spring.

**ARST 7312 Graduate Drawing II**
Prerequisite: Studio Art 7311. Continuation of Studio Art 7311. Offered in fall and spring.

**ARST 7313 Graduate Drawing III**
Prerequisite: Studio Art 7312. Continuation of Studio Art 7312. Offered in fall and spring.

**ARST 7314 Graduate Drawing IV**
Prerequisite: Studio Art 7313. Continuation of Studio Art 7313. Offered in fall and spring.

**ARST 7315 Graduate Drawing V**
Prerequisite: Studio Art 7314. Continuation of Studio Art 7314. Offered in fall and spring.

**ARST 7316 Graduate Drawing VI**
Prerequisite: Studio Art 7315. Continuation of Studio Art 7315. Offered in fall and spring.

**ARST 7321 Graduate Painting I**
Contemporary painting concepts, techniques; emphasis may be on oil, acrylic, watercolor, or mixed media. Offered in fall, spring, and summer.

**ARST 7322 Graduate Painting II**
Prerequisite: Studio Art 7321. Continuation of Studio Art 7321. Offered in fall, spring, and summer.
ARST 7323 Graduate Painting III  
Prerequisite: Studio Art 7322. Continuation of Studio Art 7322. Offered in fall, spring, and summer.

ARST 7324 Graduate Painting IV  
Prerequisite: Studio Art 7323. Continuation of Studio Art 7323. Offered in fall, spring, and summer.

ARST 7325 Graduate Painting V  
Prerequisite: Studio Art 7324. Continuation of Studio Art 7324; emphasis on development of personal direction or style. Offered in fall, spring and summer.

ARST 7326 Graduate Painting VI  
Prerequisite: Studio Art 7325. Continuation of Studio Art 7325. Offered in fall, spring and summer.

ARST 7331 Graduate Printmaking I  
Production of prints using various print processes, including relief, intaglio, planeographic process; research of printmaking techniques’ historical development; museum visits, print workshop participation encouraged. Offered in fall and spring.

ARST 7332 Graduate Printmaking II  
Prerequisite: Studio Art 7331. Principles, characteristics of printing element as surface for direct drawing; studio workshop productions generated conceptually or with aid of outside references; basic black-and-white prints, multiple color-separation methods for fine art print (all color-separation positives produced by hand methods). Offered in fall and spring.

ARST 7333 Graduate Printmaking III  
Prerequisite: Studio Art 7332. Principles, chemistry of printmaking techniques; includes drawing materials, printing elements, printing papers, solvents, inks, ink modifiers; preservation, print publishing practices. Offered in fall and spring.

ARST 7334 Graduate Printmaking IV  
Prerequisite: Studio Art 7333. Technological developments in commercial industry; their application to fine art printing processes; includes technology primarily designed for photocopy, word processing industries, computer-generated designs, color photography and color separation methods. Offered in fall and spring.

ARST 7335 Graduate Printmaking V  
Prerequisite: Studio Art 7334. Experience working with other artists; includes printer working with non-printmaker artist, printmaker working with non-artist printer; insight into complex community of atelier environment dependent on collaboration. Offered in fall and spring.

ARST 7336 Graduate Printmaking VI
Prerequisite: Studio Art 7335. Selected special research topics; may include health hazards in printmaking, development of printmaking as a fine art, acceptance and controversy of chromolithography in the 19th-century, nontraditional metals used in printmaking processes, other areas of interest to students; student research presented in text with supporting visuals. Offered in fall and spring.

**ARST 7341 Graduate Graphic Design I**
All aspects of graphic design for the print medium; emphasis on creating professional graphic design works within restricted time periods. Offered in fall and spring.

**ARST 7342 Graduate Graphic Design II**
Continuation of Studio Art 7341; more complex projects with strict deadlines.

**ARST 7349 Practicum in Art Direction**
Student works as an assistant director at UALR Graphic Design (campus studio that does work for Arkansas nonprofit organizations); duties include work with undergraduate designers on their roughs, comprehensives, mechanicals; working with studio’s clients. Offered in fall and spring.

**ARST 7351 Graduate Ceramics I**
For advanced graduate students in ceramics. Individual research in consultation with instructor; emphasis on personal expression in form, content of work. Offered in fall and spring.

**ARST 7352 Graduate Ceramics II**
Prerequisite: Studio Art 7351. Continuation of Studio Art 7351. Offered in fall and spring.

**ARST 7353 Graduate Ceramics III**
Prerequisite: Studio Art 7352. Continuation of Studio Art 7352. Offered in fall and spring.

**ARST 7354 Graduate Ceramics IV**
Prerequisite: Studio Art 7353. Continuation of Studio Art 7353. Offered in fall and spring.

**ARST 7355 Graduate Ceramics V**
Prerequisite: Studio Art 7354. Continuation of Studio Art 7354. Offered in fall and spring.

**ARST 7356 Graduate Ceramics VI**
Prerequisite: Studio Art 7355. Continuation of Studio Art 7355. Offered in fall and spring.

**ARST 7361 Graduate Sculpture I**
Serial development of student-generated concept; required number of substantive pieces completed under faculty supervision, advisement. Offered in fall and spring.

**ARST 7362 Graduate Sculpture II**
Prerequisite: Studio Art 7361. Continuation of Studio Art 7361. Offered in fall and spring.
ARST 7363 Graduate Sculpture III
Prerequisite: Studio Art 7362. Continuation of Studio Art 7362. Offered in fall and spring.

ARST 7364 Graduate Sculpture IV
Prerequisite: Studio Art 7363. Continuation of Studio Art 7363. Offered in fall and spring.

ARST 7365 Graduate Sculpture V
Prerequisite: Studio Art 7364. Continuation of Studio Art 7364. Offered in fall and spring.

ARST 7366 Graduate Sculpture VI
Prerequisite: Studio Art 7365. Development of professional portfolio; includes curriculum vitae, 8”x10” photographs or color Xerox reproductions, slide plates, exhibitions, pertinent publicity; requires oral presentation of work. Offered in fall and spring.

ARST 7371 Graduate Photography I
First of six consecutive photography courses. Student writes proposal for a body of creative work to be completed in the course series. Up to six hours may be taken concurrently. Offered in fall and spring.

ARST 7372 Graduate Photography II
Prerequisite or corequisite: Studio Art 7371. Continuation of Studio Art 7371. Offered in fall and spring.

ARST 7373 Graduate Photography III
Prerequisite or corequisite: Studio Art 7372. Continuation of Studio Art 7372. Offered in fall and spring.

ARST 7374 Graduate Photography IV
Prerequisite or corequisite: Studio Art 7373. Continuation of Studio Art 7373. Offered in fall and spring.

ARST 7375 Graduate Photography V
Prerequisite or corequisite: Studio Art 7374. Continuation of Studio Art 7374. Offered in fall and spring.

ARST 7376 Graduate Photography VI
Prerequisite or corequisite: Studio Art 7375. Continuation of Studio Art 7375. Offered in fall and spring.

ARST 7391 Graduate Illustration I
All aspects of illustration for print medium; emphasis on creation of professional illustration works within strict deadlines. Offered in fall and spring.

ARST 7392 Graduate Illustration II
Continuation of Studio Art 7391; more complex projects. Offered in fall and spring.

**ARST 7395 Graphic Design/Illustration Portfolio**
Student prepares, for faculty review, a portfolio of work of a quality to compete in today’s graphic design/illustration job market. Offered in fall and spring.

**ARST 7399 Thesis**
Students will undertake a scholarly investigation of their art studio production as related to art historical, social, and cultural influences. This investigation will culminate in an exhibition, a written thesis and oral defense. May be taken only once for a grade. Offered in fall and spring.

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**ASCI – Applied Science**

The following list of courses in applied science (ASCI) with descriptions is provided. Additional courses offered within the participating departments can be found under the “Master of Science in Biology,” the “Master of Science and Master of Arts in Chemistry,” the “Master of Science in Computer Science,” the “Master of Science in Information Quality,” and the “Non-program Courses” sections of this Catalog.

Students admitted to the UALR Graduate School but not the applied science program must have the instructor’s consent to take any applied science (ASCI) course.

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**Courses in Applied Science**

**ASCI 5310 Introduction to Signal Processing**
Prerequisite: MATH 3322 or equivalent. Introduction to the fundamental concepts in signal processing. Use of the fundamental transform techniques (Laplace transform, discrete Fourier transform, z-transform). Discrete time representation of signals, linear time invariant systems. Correlation, coherence, and time delays. Standard system models (ARMA, ARMAX). FIR and IIR filters. Three hours lecture. Three credit hours.

**ASCI 5315 Advanced Dynamics I**

**ASCI 5355 Elastic Wave Theory**
ASCI 5360 Potential Theory
Prerequisites: MATH 1451, MATH 1452, MATH 2453 and MATH 3322. Solution to Laplace’s equation using different boundary and initial conditions. One-, Two- and three-dimensional equations will be analyzed. Various coordinate systems (rectangular, cylindrical and spherical) will be used in the solution of the Laplace function, the Associate Legendre function and orthogonality of the Legendre function.

ASCI 7145, 7245, 7345 Introduction to Research in Applied Science
First semester orientation course to allow new students in the applied science doctoral program to work in a number of faculty research areas. This course will aid the student in the selection of his/her doctoral research director. Variable credit of one to three hours. Offered on demand.

ASCI 7118 Research Ethics in Science and Eng.
The course uses a case-based method to cover various topics related to professional research ethics. It is intended for entering science and engineering graduate students in the Donaghey College of Engineering and Information Technology (DCEIT). The purpose of the course is to familiarize students with professional ethics related to research and to prepare them to deal with typical ethical situations that may occur in the course of their graduate studies and professional careers.

ASCI 7189, 7289, 7389. Research in Instrumentation
Design, research in basic, applied instrumentation; requires laboratory research project involving instrumentation characterization or development. F, S.

ASCI 7190 Applied Science Seminar
Prerequisites: graduate standing, consent of thesis advisor and graduate coordinator. Students, faculty, and invited speakers will present, discuss, and exchange ideas on research topics of general interest. Credit must be received at least one semester before enrollment in the last research semester. One hour session per week. Course may not be repeated for credit. Graded credit-no credit.

ASCI 7191, 7291, 7391 Cooperative Education in Applied Science
Prerequisite: full time attendance for one semester in the applied science program with a GPA of 3.00 or better and the approval of the major professor and the graduate coordinator. Complements the classroom experience by allowing the student to apply the concepts of instrumentation in the work place. Minimum of one 10 week summer term. Written report, minimum of 200 hours work per credit hour are required. The exact number of hours, and the nature and responsibilities of the work will be specified in writing by the student, the sponsoring faculty member, and the employer. The course may be repeated for credit. The course cannot be used for credit toward the requirements for an applied science degree.

ASCI 7192 Biosciences and Bioinformatics Seminar
Prerequisites: graduate standing, consent of thesis advisor and graduate coordinator. Students, faculty, and invited speakers will present, discuss and exchange ideas on research topics of
general interest in the field of Biotechnology. One-hour session per week. Course may be repeated for credit. Graded: credit/ no credit. Cross-listed with BINF 7192.

**ASCI 7295 Practical Topics in Science Management**
A survey of practical topics relevant to practicing scientist and engineers such as ethics, project management, and grant writing. While an emphasis is placed on bioinformatics, topics will be of interest to all participating in science and engineering projects. Two credit hours. Cross-listed with BINF 7295.

**ASCI 7307 Smart Materials**
Prerequisite: ASCI 4320 or equivalent. This course will deal with the unique nonlinear, hysteretic response of smart materials that arise due to coupling between mechanical and thermal or electric or magnetic fields. Specifically, microstructural characteristics and constitutive modeling of shape memory alloys, ferroelectric materials and ferromagnetic materials will be covered. Use of these smart materials in sensor and actuator design will be addressed.

**ASCI 7318 Micro- and Nano-Fabrication**
Prerequisites: Consent of instructor. This course will introduce some of the important micro- and nano-fabrication techniques that are mostly used in the areas of microelectronics and nanotechnology. Some of the topics that will be covered include diffusion of impurities, thermal oxidation, ion implantation, optical lithography, thin film deposition, etching, nano-lithography, nano-imprinting, growth of nano-rods and nano-springs by glancing angle deposition, and growth of carbon nano-tubes. During the course, students will become familiar with some of the basic experiments including thin film and glancing angle depositions, etching, and film characterization techniques. The course is intended for graduate students from science and engineering majors.

**ASCI 7317 Nano-structural Materials: Physical and Chemical Properties**
Prerequisites: SYEN 3372 or PHYS 4340 or CHEM 4340 or equivalent. This course introduces students to the area of nanotechnology and the novel properties of the materials built at the nanoscale. The course will cover the main properties of nano-materials, various methods for synthesis and characterization and the most up-to-date applications from nano-electronics, advanced materials, bio-medicine, etc. The course is designed for graduate students with a background in chemistry, physics, and engineering.

**ASCI 7340 Applied Instrumental Optics**
Fundamental concepts in design and implementation of optical principles in analytical instrumentation; solving optics engineering problems; includes electromagnetic wave analysis, reflection and refraction, interference and diffraction, optical waveguides, Fourier analysis, coherence and holography. On demand.

**ASCI 7341 Electro-Optics Instrumentation**
Prerequisite: Applied Science 7340 or equivalent. Physical principles and operating characteristics of electro-optical devices and systems; gas, chemical, solid state and semiconductor lasers; Gaussian beam optics, laser modulators and scanners; imaging devices; thermal and photon
detectors; fiber and integrated optics; nonlinear optical devices. Offered on demand.

**ASCI 7344 Plant Hormonal Biology**
This class will provide fundamental knowledge about major classes of phytohormones (auxins ABA, ethylene, gibberellins, cytokinins) as well as new plant hormones such a brassinosteroid strigolactones jasmonates. The structure and function of the all classes of plant hormones will be discussed in some detail and the interactions and crosstalks between different phytohormones will be highlighted. Special attention will be given to regulation of biosynthesis of phytohormones for biotechnological applications and agriculture.

**ASCI 7355 Introduction to Geophysics**
Prerequisite: MATH 1451. Application of geology and geophysics to study the interior of the earth and the development of its surface features.

**ASCI 7365 Advanced Seismology**

**ASCI 7375 Biochemistry of Biological Molecules**
Prerequisites: introductory biochemistry course or permission of the instructor. Three, five-week modules providing a critical introduction into the structure and biological functions of nucleic acids, proteins and membranes. Topics in the first section, nucleic acids, include structure-function relationships among DNA, RNA, and proteins during replication, transcription and translation. Topics in the second section, proteins, include the principles of protein folding, function, purification and enzyme kinetics. Topics in the third section, membranes, include mobility of membrane constituents, properties of membrane proteins, mechanisms of membrane transport, membrane synthesis and flow, secretion, receptors and signal transduction.

**ASCI 7380 Biomedical Instrumentation**
Principles of biomedical instrumentation; special constraints in safety, signal transduction, signal-to-noise ratio; special problems in medical instrument design; includes Food and Drug Administration regulations, electrical processing, data acquisition; medical instrument design case studies; emphasis on theory, common difficulties, present research directions of bio-instrumentation design; requires laboratory assignments, major laboratory project. Three hours lecture. Three credit hours. Offered on demand.

**ASCI 7381 Physiological Measurement Techniques**
Principles, physiology, physics, instrumentation of modern physiological measurements; includes measurements of electrocardiogram, pulmonary function, metabolic rate, blood flow, human performance; ultrasonic imaging, stress tests, impedance cardiology; emphasis on theory of each technique’s measurement difficulties, present research directions; requires proposal of a
technique that overcomes some disadvantages of existing methods. Three hours lecture. Three credit hours. Offered on demand.

**ASCI 7385 Concepts in Genetic Analysis**
Prerequisites: introductory undergraduate genetics or molecular biology course. Methods of genetic analysis including mutant isolation, genetic and physical mapping, receptors genetics, evolutionary mechanisms, molecular variation and genomic evolution.

**ASCI 7399 Special Topics in Applied Science**
Detailed study in applied science and related areas; may be lecture or lecture and laboratory, depending on specific topics. Variable credit of one to three hours. Offered on demand.

**ASCI 7405 Principles of Analytical Instrumentation**
Modern analytical instrumentation; physical, chemical basis for measurements; basic signal processing; basic optics; includes specific instrumentation, methods for ultraviolet-visible and infrared spectrophotometry, atomic and mass spectroscopy, nuclear magnetic resonance, x-ray methods, analytical separations.

**ASCI 7451 Introduction to Air Contamination Evaluation**
Generation, propagation, measurement, evaluation of air contaminants (including aerosols, gases, vapors); principles of sample collection and analysis, direct measurement, statistical analysis and interpretation of results; applications include monitoring and modeling of industrial, community, transportation, indoor environments and sources.

**ASCI 8100 – 8600 Master’s Thesis**
Prerequisites: consent of advisor.

**ASCI 9100 – 9600 Doctoral Research/Dissertation**
Prerequisites: consent of advisor. One to nine credit hours to be determined at the time of registration.

**ASCI 9700 – 9900 Doctoral Research/Dissertation**
Prerequisites: consent of advisor. One to nine credit hours to be determined at the time of registration.

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**ASTR – Astronomy**

**5301 Astrophysics**
PHYS 2322 required. ASTR 2300 recommended, but not required. A graduate level course in astrophysics, with an emphasis on applying the tools of mechanics, electromagnetism, thermodynamics, and quantum theory to understand the processes inherent in galaxies, cosmology and the structure and evolution of stars, including a focus on extragalactic astronomy. This course is dual listed in the UALR Undergraduate Catalog as ASTR 4301. This course is not
open to students with credit for ASTR 4301. Three hours of lecture per week.

**AUSP – Audiology/Speech Pathology**

The first number listed for courses is for the UAMS College of Health Related Professions; the second (in parenthesis) is for the University of Arkansas at Little Rock.

**AUD 5013 (AUSP 7360) Research Methods in Communication Disorders**
Introduction to research methodologies in audiology and speech pathology. Includes prospectus development, funding sources, data collection and analysis, and professional research writing and editing in communicative disorders and/or speech sciences.

**AUD 5023 (AUSP 7380) Basic Diagnostic Audiology**
Principles and techniques for basic audiologic evaluation, including pure tone testing, speech audiometry, and the clinical application of masking, immittance, and otoacoustic emissions. Relevant calibration issues will also be discussed.

**AUD 5033 (AUSP 7370) Educational Audiology**
The delivery of audiology services to a school-based population. Includes the development, management, and utilization of hearing and middle ear system screening programs, classroom acoustics, selection and fitting of classroom-based amplification, and federal laws associated with children who have special needs.

**AUD 5041 (AUSP 7181) Clinical Laboratory**
Lab instruction in clinical procedures and methods for evaluation and treatment of clients and care, maintenance and use of technology in audiology clinical practice. Perform evaluation and rehabilitation procedures under faculty supervision.

**AUD 5043 (AUSP 7331) Anatomy and Physiology of the Auditory and Vestibular Systems I**
Detailed information of the anatomy, physiology, electrophysiology, and neurophysiology of the auditory and vestibular systems.

**AUD 5053 (AUSP 7332) Acoustics and Psychoacoustics**
Basic information regarding the physics of sound, the measurement of sound and an introduction to the psychoacoustic basis of hearing and its clinical applications.

**AUD 5063 (AUSP 7333) Auditory Processing**
Theoretical overview, differential assessment, and treatment of adults and children with auditory processing disorders (APD). Intended to blend theoretical knowledge with practical clinical methods and techniques. Prerequisites: AUD 5023 (7380).

**AUD 5073 (AUSP 7381) Advanced Diagnostic Audiology**
Principles of and techniques for advanced audiometric evaluation, including speech audiometry, reflex decay, audiometric special tests and otoacoustic emissions. Report writing and making appropriate recommendations will also be discussed.

**AUD 5083 (AUSP 7382) Clinical Electrophysiology**
Principles and techniques in the use of evoked potentials to assess auditory function. Includes case studies and analysis of waveforms. Lecture and laboratory.

**AUD 5103 (AUSP 7383) Medical Audiology**
Introduction to the major pathologies of the auditory and vestibular systems, as well as medical/surgical treatment of those pathologies. Audiologic assessment and management of the disorders will also be discussed. Prerequisites: AUD 5023 (7380) and AUD 5043 (7331).

**AUD 5112 (AUSP 7321) Instrumentation in Audiology & Speech Pathology**
Designed to introduce students to basic principles of electronics and electrical safety and to proper use and care of equipment used in the evaluation and treatment of the auditory and vestibular systems. Two credit hours.

**AUD 5123 (AUSP 7335) Advanced Psychoacoustics**
Advanced information regarding how listeners with normal hearing and those with hearing loss process sound. Topics include: loudness, frequency selectivity, temporal processing, pitch perception, space perception, object/pattern perception, speech perception, experimental design, and signal detection theory. Prerequisites: AUD 5053 (7332).

**AUD 5132 (AUSP 7222) Speech Perception**
This course is designed to examine the perception and production of speech sounds and the prosodic features of speech. Several theories of speech perception will be presented and discussed, and the effects of hearing loss on speech perception and production will be explored. Two credit hours. Prerequisite: Graduate student standing.

**AUD 5133 (AUSP 7367) Infant-Toddler Communication**
Investigation of prelinguistic/early linguistic communication and feeding/swallowing development. Multidisciplinary assessment and intervention for infants and toddlers (birth to five) with special needs and their families. Current formal and information assessment tools and techniques, current intervention strategies, enhancing the therapeutic process across environments, utilizing team collaboration, and facilitating parent-infant interaction.

**AUD 5143 (AUSP 7323) Advanced Electrophysiology**
Principles and techniques in the use of mid- and late-evoked potentials to assess auditory function. Course includes case studies and analysis of waveforms. Laboratory assignments will be made. Two credit hours. Prerequisites: AUSP 7282. Electrophysiologic Assessment of the Auditory System I.

**AUD 5152 (AUSP 7323) Advanced Electrophysiology**
Principles and techniques in the use of mid- and late-evoked potentials to assess auditory function. Prerequisite: AUD 5083 (7382).

**AUD 5152 (AUSP 7261) Organization and Administration of Clinical Programs**

**AUD 5153 (AUSP 7334) Pediatric Audiology**
Normal auditory development and theoretical, clinical, and practical issues involved in screening, assessment, and management of children with hearing loss. Prerequisite: AUD 5023 (7380).

**AUD 5162 (AUSP 7224) Genetics of Hearing Loss**
Basic information on the genetic basis of hearing loss and an overview of syndromic and non-syndromic hearing losses. Strategies for referral to genetic counselors and other health care professionals will be included. Prerequisites: AUSP 7383 Medical Audiology.

**AUD 5163 (AUSP 7320) Auditory Based Intervention**
Auditory-based speech/language intervention is based on a normal neurological developmental model aimed at maximizing the child’s use of his/her residual hearing to communicate. The focus of this course is to provide information about current amplification and implant technology and to detail auditory-based principles, strategies, and techniques used to facilitate spoken communication.

**AUD 5173 (AUSP 7365) Counseling in Communication Disorders**
Principles of counseling for working with persons with communication disorders and their families throughout the life span. Students review major theories of counseling and select those most useful for the various settings and practices of audiology and speech pathology. Students demonstrate their understanding of the counseling process through case presentations.

**AUD 5183 (AUSP 7326) Outcomes Research and Evidence-Based Practice**
Provides students with understanding of the principles of outcomes research, and the levels of evidence supporting clinical practice. Students will understand the principles of critical evaluation of diagnostic procedures and critical evaluation of the evidence for treatment efficacy and effectiveness as well as the importance of practice guidelines that define best practices. Two credit hours.

**AUD 5192 (AUSP 7230) Cultural Competence in Audiology**
Knowledge and skills needed by audiologists to provide culturally competent services to diverse clients. Sources of diversity and application of concepts to the field of audiology will be discussed.

**AUD 5193 (AUSP 7336) Anatomy and Physiology of the Auditory and Vestibular Systems II**
Continuation of the first anatomy and physiology course with greater focus on skull anatomy and on peripheral and central nervous system embryology, neuroanatomy, and neurophysiology.

**AUD 520V (AUSP 7V87) Topics in Audiology**
Emphasis on topics related to clinical or rehabilitative audiology. May be repeated for up to six hours. Prerequisite: consent of instructor.

**AUD 5212 (AUSP 7227) Hearing Conservation**
Noise measurement, OHSA requirements, occupational noise management, recreational audiology, and designing and implementing hearing conservation programs for adults and children. Prerequisites: AUD 7221 Instrumentation; AUD 7380 Basic Diagnostic Audiology. Two credit hours.

**AUD 5222 (AUSP 7228) Professional Issues in Audiology & Speech Pathology**
Personal and professional ethical values and their applications to dilemmas encountered in the clinical practices of speech pathology and audiology will be explored with students. Preferred practices and criteria for quality services will be topics for discussion. Two credit hours.

**AUD 5223 (AUSP 7384) Amplification**
Prerequisite: AUSP 7380 Basic Diagnostic Audiology. Theory and practice in effective use of hearing aids, auditory training equipment; includes their component parts, electro-acoustic analysis, hearing aid orientation and counseling, approaches to hearing aid evaluation.

**AUD 5232 (AUSP 7229) Audiology: Practice Management**
Provides students with a broad understanding of the roles of audiologists in meeting the needs of the communicatively impaired. Students will understand preferred practices, criteria for quality services and quality improvement through the evaluation of service delivery models and exploration of the laws affecting service delivery in health care and educational settings. Two credit hours.

**AUD 5233 (AUSP 7385) Pediatric Amplification and Intervention**
Advanced strategies specific to pediatric hearing assessment, applicable technologies and management utilizing a family centered approach to intervention. Prerequisites: AUSP 7380, 7381.

**AUD 5243 (AUSP 7386) Audologic Rehabilitation**
Adult Principles of audologic rehabilitation for adults, including diagnosis, counseling, use of amplification and other assistive devices, and communication strategies. Various models of audologic rehabilitation presented with students presenting case studies demonstrating the basic procedures underlying each model.

BINF – Bioinformatics
**BINF 5445 Bioinformatics Theory and Applications**
Prerequisites: Course Director’s permission plus the following: BIOL 3300: Genetics or equivalent, IFSC 3320: Database Concepts or equivalent, IFSC 2300: Object-oriented Technology (Java Programming) or experience with another programming language such as “C” or “C++”, STAT 3352: Applied Statistics I or equivalent, MATH 1304: Calculus I or equivalent recommended, BINF 2345: Introduction to Bioinformatics recommended, some exposure to molecular biology recommended. An overview of concepts central to the study and application of bioinformatics drawing upon the fields of biostatistics, computer and information science, and the life sciences. Three hours of lecture plus two hours of laboratory per week. Four credit hours.

**BINF 7145, 7245 Introduction to Bioinformatics Research**
Prerequisite: permission of instructor. Rotations through the bioinformatics, biostatistics, information science, and/or life sciences research laboratories of faculty participating in the bioinformatics graduate program.

**BINF 7193 Bioinformatics Seminar**
Prerequisites: bioinformatics graduate student status or instructor’s consent. A survey of scientific and technical topics relevant to bioinformaticists. The seminar has two components: attending seminars hosted primarily by BINF Ph.D. students and participating in a presentation workshop where students present seminars on their research interests. A passing grade is required in both components for a passing grade in the course. One credit hour.

**BINF 7199, 7299, 7399, 7499 Special Topics in Bioinformatics**
Prerequisites: instructor’s consent. Detailed study in bioinformatics and related areas; may be lecture or lecture and laboratory, depending on specific topics. Variable credit of one to four hours. Offered on demand.

**BINF 7295 Practical Topics in Science Management**
A survey of practical topics relevant to practicing scientists and engineers such as ethics, project management, and grant writing. While an emphasis is placed on bioinformatics, topics will be of interest to all participating in science and engineering projects. Two credit hours. Cross-listed with ASCI 7295.

**BINF 8445 Bioinformatics Master’s Capstone Project**
Prerequisites: Course Director’s permission and completion of at least one graduate-level course in each of the four core areas of the UALR/UAMS Joint Graduate Program in Bioinformatics (must include BINF 5445: Bioinformatics Theory and Applications). This course provides a structured context in which the student completes an individual capstone project for the Masters Degree in Bioinformatics. The project draws upon all four core areas of the graduate program and is done under the direction of a project mentor who is a member of the graduate faculty of the UALR/UAMS Joint Graduate Program in Bioinformatics. Four credit hours.

**BINF 9100-9900 Doctoral Research/Dissertation**
Prerequisite: Consent of advisor. Bioinformatics doctoral research leading to Ph.D. dissertation.
BINS – Business Information Systems

**BINS 5310 Network Technologies Local**
MBA or MS in BIS Elective. A study of the role of telecommunications in information resource management, with emphasis on business applications in a network environment. Principles of network and installation, system component selection, administration, security, and control. This course is not open to students with credit for MGMT 4310 or BINS 4310.

**BINS 5350 Business Database Management Systems**
MBA Elective, MS in BIS prerequisite course. Does not apply toward MS in BIS Core requirements. Addresses the concepts and principles underlying the design and application of relational graphics based data modeling, relational algebra, the database language SQL, database design, and normalization theory. Projects, which typically are implemented using a current commercial database management system software, are assigned to reinforce most of the concepts taught in the course. This course is not open to students with credit for MGMT 4350 or BINS 4350.

**BINS 5351 Data Analysis and Reporting**
Prerequisite: C or better in MGMT/BINS 4350/5350 or equivalent or consent of instructor. Students will gain practical experience in using advanced database techniques and data visualization, data warehousing, reporting, and other Business Intelligence (BI) tools. Contemporary BI tools and technologies will be used to create intelligent solutions to realistic business problems. Students with credit for BINS 4351 may not take BINS 5351 for additional credit.

**BINS 7250 Strategic Mgmt of IS & Tech**
Prerequisite: ACCT 7304, ECON 7313 and MGMT 7180. Focus on strategic and operational roles of information systems and technology (IS) and other information resources, including their applications, value-adding processes, sourcing, governance, organizational and strategic alignment as well as limitations. Management of the IS asset portfolio using a risk/reward framework considering life cycle, obsolescence, innovation, and strategic impact.

**BINS 7303 Systems Development and Database Design**
MS in BIS Foundation Core Course. The course is a survey of information system development. It will provide students with non-IS backgrounds with foundation knowledge and skills in information systems development. The course overviews the process of system development using SDLC (system development life cycles) with an emphasis on database development. Three credit hours.

**BINS 7304 Business Applications for Decision Making**
An exploration of the integration of business application technologies and procedures, such as cloud computing, business intelligence, mobile applications, and security being leveraged by corporations.
**BINS 7305 Advanced Database Management Systems**  
MS in BIS Core Course or MBA Elective. Prerequisites: MGMT 4350/5350, BINS 4350/5350, or equivalent. Advanced concepts in database management, expanding from the relational data model to the multidimensional model, object-relational techniques, and web accessed data.

**BINS 7307 Systems Analysis and Design Methods**  
MS in BIS Core Course. MBA Elective. Prerequisite: MGMT 3307, BINS 3307, or equivalent. Application of system analysis and design methodology with emphasis on Object-Oriented (OO) methodologies. Includes basic concepts, modeling techniques, and tools for systems analysis and design.

**BINS 7309 Cloud-Based Business Intelligence**  
Students will experience a hands-on exploration of cloud-based business intelligence tools, technologies, and procedures being leveraged by corporations.

**BINS 7315 E-Commerce Technologies**  
MBA or MS in BIS Elective. An overview of e-commerce technologies, including analysis of e-commerce infrastructure, technology, and managerial and implementation strategies. Focus on web development.

**BINS 7350 Information Systems Management**  
MBA and MS in BIS Core Course. The strategic perspective for aligning competitive strategy, core competencies, and information systems. Development, implementation, and management of information systems that support the operational, administrative, and strategic needs of the organization, its business units, and individual employees.

**BINS 7351 Management Information Systems: Theory and Application**  
MBA or MS in BIS Elective. Information flow between various decision points in functional areas of a variety of organizations; develops understanding of routine information flow, how it can be made more effective and efficient in terms of handling, processing, refining, dissemination; uses executive and systems design perspectives; reviews and uses real systems in local government and business organizations.

**BINS 7352 Emerging Technologies and Strategic Issues**  
MS in BIS Core Course. MBA Elective. Prerequisite: BINS 7350 or equivalent. In-depth examination of the strategic use and development of an integrated technical architecture (hardware, software, networks, and data) to serve organizational needs in a rapidly changing competitive and technological environment. Strategic use of technologies for intra- and inter-organizational systems.

**BINS 7353 Project Management**  
Prerequisites: BINS 7304, 7305, 7308, 7312, 7350, and completion of or concurrent enrollment in ACCT 7330. MS in BIS Core Course. Capstone course to be taken at the end of the program. A study and application of project management techniques through the development and implementation of an application development project. Includes all stages of the project
development life cycle, with focus on enterprise application integration.

**BINS 7370 Issues in Manufacturing and Operations Management**
MBA or MS in BIS Elective. Prerequisite: All Core courses. Concerns of manufacturing, service management; includes product and process design, plant capacity and location, work force development, scheduling, inventory control, product and service improvement, vendor relations; emphasis on resource and functional integration, information systems use, team solutions, global marketplace competition strategies; decision-making tools such as forecasting, queuing theory, simulation, network analysis.

**BINS 7371 Production/Operations Management**
MBA or MS in BIS Elective. Prerequisite: ECON 7320 or ECON 7313, or equivalent. A study of traditional ideas and techniques of production/operations management as well as contemporary practices and concepts being employed by businesses. In this course, the term “production” refers to the conversion of labor hours, dollars, materials, and skills (inputs) into products or services.

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**BIOL – Biology**

**BIOL 5199, 5299, 5399, 5499 Special Topics in Biology**
Prerequisites: 20 biology hours, consent of instructor (other prerequisites may be required depending on topic). Specialized areas of study in biological sciences. Credit varies with depth of content. One to four hours lecture per week; up to four hours laboratory per week. Offered on demand.

**BIOL 5201 AIDS**
Prerequisites: BIOL 1401, graduate standing. The disease AIDS; includes cell biology, the disease process, and the social, economic, legal, and political aspects related to the disease and society.

**BIOL 5305 Animal Behavior**
Prerequisites: BIOL 1401, 2403, eight additional biology hours or consent of instructor. Known behavior of various vertebrate, invertebrate phyla; emphasis on adaptive significance; special attention to mating, defensive, nutritive, social behaviors; ontogeny of behavioral patterns (where known); relationship of behavior to ecology of various animal populations. Three hours lecture per week.

**BIOL 5310 Evolution**
Prerequisites: four hours of the core science requirement, graduate standing. Basic principles of evolutionary biology: Darwinian Theory, principles of inheritance, microevolution, and speciation processes; includes the evolution of humans.

**BIOL 5311 Neurobiology**
Prerequisites: 16 hours in biology or consent of instructor; CHEM 1401 or 1403 strongly
encouraged. This course examines the functioning of the nervous system, with emphasis on vertebrates- in particular, humans. The course covers the structure and function of neurons as fundamental unit of the nervous system, functional neuroanatomy, and the basic principles of nervous system development. Three hours lecture per week. Three credit hours.

BIOL 5312 Population and Community Ecology
Prerequisites: BIOL 3303 and at least junior standing. Graduate standing required if student enrolled in BIOL 5312. Basic principles of population ecology will be discussed, including niche concept, demography, population growth and regulation, life history patterns, sociality, competition, predation, mutualisms, and control of community structure. Dual-listed in the UALR Undergraduate Catalog as BIOL 4312. Students cannot receive graduate credit for BIOL 5312 if they have previously taken BIOL 4312. Three hours of lecture per week. Three credit hours.

BIOL 5314 Soil Biology
Prerequisites: BS in biology or permission of the instructor. Concepts of soils are presented with emphasis on biological processes and soil/ecosystem relationships. Hands-on laboratory exercises and field exercises will supplement course lectures. Dual-listed in the UALR Undergraduate Catalog as BIOL 4314. This course is not open to students with credit for BIOL 4314. Three hours lecture per week. Three credit hours.

BIOL 5315 Toxicology
Prerequisites: BS in biology or permission of the instructor. Principles of toxicology are presented with an emphasis on toxicokinetics and toxicity mechanisms. Laboratory testing, risk analysis, and study design requirements are applied to various settings. Lectures will be supplemented with case studies. Dual-listed in the UALR Undergraduate Catalog as BIOL 4315. This course is not open to students with credit for BIOL 4315. Three hours lecture per week. Three credit hours.

BIOL 5401 Cell Biology
Prerequisites: BIOL 1402, 12 additional hours in biology, CHEM 1401 or 1403; microbiology is strongly encouraged. A study of the organization of cells as related to the structure and function of biological molecules. Emphasis is placed on eukaryotic cells. Three hours lecture, three hours laboratory per week.

BIOL 5402 Limnology
Prerequisites: BIOL 1401, 2402, 2403, 3303, CHEM 1403 or equivalent. Physical, chemical characteristics of water; morphometry, physiography of lake, stream basins; ecology, taxonomy of aquatic communities; laboratory includes physical, chemical, biological sampling and analysis methods; field work includes various types of aquatic habitats and sampling methods involved; requires some extended Saturday field trips. Two lectures, one four-hour laboratory per week.

BIOL 5403 Comparative Physiology
Organ function in a wide range of organisms, including vertebrates and invertebrates. A comprehensive survey of functional relationships in more than one group of animals. Three hours
BIOL 5404 Mammalogy  
Prerequisites: Biology 3404, 3409, equivalent, or consent of instructor. Classification, distribution, ecology, natural history of mammals; emphasis on Arkansas species; field studies, preparation of study specimens. Two hours lecture, two hours laboratory per week.

BIOL 5405 Ichthyology  
Prerequisites: BIOL 1400 or 1401, 3404 or 3409 or equivalent, or consent of the instructor. Classification, phylogeny, morphology, physiology, and ecology of fishes concentrating on North American and Arkansas freshwater fishes. Three hours lecture, three hours laboratory per week.

BIOL 5406 Pathogenic Microbiology  
Prerequisites: BIOL 1400 or 1401, 2401, or their equivalents. Survey of pathogenic microbiology, immunology, and virology with emphasis on fundamental principles of each science and their application to the diagnosis and control of human diseases. Three hours lecture, two hours laboratory per week.

BIOL 5407 Herpetology  
Prerequisites: BIOL 3404, 3409, or equivalents, or consent of instructor. Classification, anatomy, distribution, ecology, natural history of amphibians and reptiles; emphasis on Arkansas species in field techniques, student projects, laboratory work, curatorial training. Two hours lecture, four hours laboratory per week.

BIOL 5409 Plant Taxonomy  
Prerequisites: BIOL 1400 or 1401 2402, or their equivalents. A study of the principles of plant identification, classification, systematics, and nomenclature. Major families of flowering plants with emphasis on the floristics of the immediate area. Two hours lecture, four hours laboratory per week.

BIOL 5410 Fisheries  
Prerequisites: BIOL 1400 or 1401, 2403, 3303 or 3409, or their equivalents, or consent of the instructor. A survey of fish management and fish culture principles and techniques including population assessment, habitat improvement, pond culture, commercial fish farming, and an introduction to fish diseases. Three hours of lecture, three hours laboratory per week.

BIOL 5411 Ornithology  
Prerequisites: BIOL 2403, 12 additional biology hours. Selected aspects of avian biology; emphasis on ecology, evolutionary biology, natural history, classification of birds; includes lecture, discussion, laboratory, field study.

BIOL 5412 Plant Ecology  
Study of plant species ecology (life history and reproductive biology) and vegetation ecology (abundance, structure, dispersion, patterns, and dynamics), with emphasis on quantitative
methodology and management principles. Three hours lecture, two hours laboratory per week.

**BIOL 5413 Immunology**
Immunobiology and immunochemistry of humoral and cellular mechanisms of immunity. Three hours lecture, two hours laboratory per week.

**BIOL 5415 Biometry**
Prerequisites: 12 hours of biology, environmental health science, or earth science (in combination or singularly), MATH 1302 or higher numbered course, three hours of statistics or consent of instructor, graduate standing. Computer-based course in experimental design, data analysis, and interpretation; objective is the application of statistical procedures relevant to the academic emphasis of students, not statistics per se; especially beneficial to those students planning to seek an advanced degree or to go into quality control or research positions. Offered in spring on even years.

**BIOL 5416 Microscopy**
Prerequisites: 15 hours of biology, graduate standing. Laboratory in the fundamental theory and practical application of light and electron microscopy including specimen preparation, photomicrography, and digital computer image processing and enhancement; topics include brightfield, darkfield, phase, differential interference contrast, polarized, and epi fluorescent light microscopy and scanning and transmission electron microscopy; emphasizes experimental design and use of the microscope as an experimental tool.

**BIOL 5417 Molecular Biology**
Prerequisites: nineteen hours in biology including both BIOL 2401 and BIOL 3300; CHEM 1401 or 1403; BS in biology or permission of instructor. Successful completion of either BIOL 3400 or BIOL 4401 is strongly encouraged. A study of molecular biology theory and practice. Emphasis is on the study of model systems to understand the current approaches and laboratory techniques necessary to answer basic questions in current molecular biology. Two hours of lecture and four hours of laboratory per week.

**BIOL 5418 Biotechnology**
Prerequisites: 19 hours of biology including 2401 and 3300; CHEM 1401 or 1403. BIOL 3400 and 4401/5401 are strongly recommended. BIOL 4417/5417 is also recommended or may be taken concurrently. A study of the applied science of biotechnology designed to introduce students to the elements of a biotechnological career. Topics range from traditional biotechnology such as animal and plant tissue culture to contemporary molecular biotechnology and the use of recombinant DNA technology and genetic engineering in research and industry. Emphasis will be placed on current biomedical, pharmaceutical, and agri/industrial applications. Graduate students must complete and defend a term paper. Two hours lecture, four hours laboratory per week.

**BIOL 5419 Plant Physiology**
Prerequisites: BIOL 1400 or 1401, 2402, CHEM 2450, or their equivalents, or consent of instructor. Study of water relations, nutrition, and metabolism including photosynthesis, growth,
and development. Two hours lecture, four hours laboratory per week.

**BIOL 5421 Introduction to Geographic Information Systems**
Prerequisites: ERSC 2320 or ENHS 3415 or BIOL 4309, or consent of instructor. This course introduces Geographic Information Systems (GIS) and the use of spatial data for problem-solving in science. The lecture portion of the course focuses on the data models used to represent spatial features and on the processes involved in creating, acquiring, analyzing, and displaying georeferenced information. The laboratory portion of this course employs a project-based methodology including applications from geology, biology, environmental science, and political science to foster basic GIS software proficiency. Two lecture hours per week, four laboratory hours. Four credit hours.

**BIOL 5422 Mammalian Physiology**
General physiological principles and a treatment of functions and interrelations of mammalian systems. Three hours lecture, two hours laboratory per week. Four credit hours.

**BIOL 5423 Plant Anatomy**
Detailed coverage of the microscopic anatomy of all the organs of seed plants and a critical evaluation of the major tissue types found within these plant organs. Two hours lecture, hour hours laboratory per week. Four credit hours.

**BIOL 5424 Entomology**
Prerequisites: BIOL 3303 or equivalent, or permission of the instructor. A study of insects including their anatomy, physiology, behavior, development, diversity, classification, and economic importance. Two hours lecture, four hours laboratory. Four credit hours.

**BIOL 5426 Plant and Human Nutrition**
Prerequisites: BS in Biology or permission of the instructor. Plant nutrition refers to the needs and uses of the basic chemical elements in the plants, which are essential for plant growth and development. Thus, plant nutrition is an area of fundamental importance for both basic sciences (Plant physiology, Plant cell and molecular biology, Plant development) and applied sciences (Agronomy, Crop physiology, Horticulture, Human nutrition and health). Human nutrition refers to the needs and uses of the basic chemical elements and compounds in the human body, which are essential for human development and healthy life. The course consists of lectures, laboratory exercises, and case studies. Dual-listed in the hours lecture, and four hours laboratory per week. Four credit hours.

**BIOL 5427 Tissue Engineering**
Prerequisites: BS in Biology or the permission of the instructor. Tissue engineering (TE) is defined as the development and manipulation of laboratory-grown molecules, cells, tissues, or organs to replace and/or support the function of injured body parts. TE applies the principles and methods of biology, stem cell biology, immunology, life sciences, physical sciences, engineering, cell and drug delivery, nanobiotechnology, and bioinformatics to understand physiological and pathological systems and to modify and create cells and tissues for therapies for structural tissue
repair (e.g., skin, bone, cartilage, tendon, muscle, and blood vessel), for enhancing metabolic function (e.g., liver), for improved drug delivery (localized delivery of a drug), and as a vehicle for cell-based gene therapy. Dual-listed in the UALR Undergraduate Catalog as BIOL 4427. The course consists of two hours of lectures and four hours of laboratory per week. This course is not open to students with credit for BIOL 4427. Four credit hours.

**BIOL 7110 Independent Study**
Independent study provides an opportunity for a student to gain depth in a specialized area to support a particular aspect of their research. The specific topic and course of study will vary by student and are to be developed with a faculty member in the department and the student’s advisory committee to augment the student’s background in a specific area or to fill a gap in knowledge when no regularly-scheduled courses are available. No more than two hours of independent study may be counted toward a graduate degree.

**BIOL 7210 Independent Study**
Independent study provides an opportunity for a student to gain depth in a specialized area to support a particular aspect of their research. The specific topic and course of study will vary by student and are to be developed with a faculty member in the department and the student’s advisory committee to augment the student’s background in a specific area or to fill a gap in knowledge when no regularly-scheduled courses are available. No more than two hours of independent study may be counted toward a graduate degree.

**BIOL 7191 Graduate Seminar**
Prerequisites: graduate standing and consent of graduate coordinator. Students, faculty, and invited speakers present, discuss, and exchange ideas on research topics and methods in biology. MS students required to enroll three times and obtain three hour credit. Graded C/NC.

**BIOL 7199, 7299, 7399 Selected Topics in Biology**
Prerequisites: Graduate standing or consent of instructor. Advanced studies in specialized areas of biological science, such as cell and molecular biology, microbiology, genetics, organizational biology, ecology, fisheries and wildlife management. One to three hours lecture per week depending on credit hours. Offered on demand.

**BIOL 7310 Experimental Design in Biology**
Prerequisites: Graduate standing and 4415/5415 Biometry or equivalent. Experimental design in biology is designed to provide students with an appreciation of the utility of a rigorous experimental design and the use of inferential statistics in research with biological systems. Students will be given a background in the statistical requirements of manipulative experiments and will critique research designs in recently published literature.

**BIOL 7311 Behavioral Ecology**
Prerequisites: BIOL 3303, BIOL 4305/5305 or the equivalent or consent of the instructor. This course is a broad introduction to the field of behavioral ecology and how evolutionary and ecological constraints shape behavioral strategies and tactics. Topics to be addressed include the
evolution of life histories, reproductive decisions, resource acquisition and utilization, and the costs and benefits of sociality. Three hours lecture per week. Computer exercises during some scheduled lecture times will include foraging and habitat use models, game theory, and species interaction models.

**BIOL 7410 Phylogenetic Analysis**
Prerequisite: Graduate standing and completion of two courses (or equivalent) from the following: Biometry (BIOL 4415/5415), Linear Algebra (MATH 3312), Mathematical Models (MATH 3324), Molecular Biology (BIOL 4417/5417). Student may also enroll with the consent of the instructor. A computer based course in phylogenetic analysis of molecular sequence data through the use of both distance and character based models. Parsimony, maximum likelihood, and Bayesian inference are key procedures used to assess, test and characterize molecular evolution. Two hours lecture and four hours laboratory per week. Four credit hours.

**BIOL 7499 Selected Topics in Biology**
Prerequisites: Graduate standing or consent of instructor. Advanced studies in specialized areas of biological science, such as cell and molecular biology, microbiology, genetics, organismal biology, genomics, ecology, fisheries and wildlife management. Two or three hours lecture per week and 2-4 hours laboratory per week. Offered on demand. Four credit hours.

**BIOL 8100, 8200, 8300, 8400 Thesis Research**
Prerequisite: full admission to the program. Thesis research in biology is designed to provide students with graduate level research experience. Under the directions of the student’s major advisor and graduate committee, the student will carry out original research to support his/her thesis.

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**BSAD – Business**

**BSAD 7100 Managing Your Career**
Course Description: MBA Core Course. Empowers students with the knowledge and tools to effectively manage their own careers. The course offers career development and placement support to help students identify their ideal career based on interests, motivational traits, personality, values, abilities, aptitudes, personal work style, and work environment preferences. Addresses career related concerns such as: exploring career options, building and leveraging a professional network, developing a personal marketing plan, job-search and transition skills, behavioral interviewing, job and company-specific research, business etiquette, and offer negotiation.

**BSAD 7395 Cooperative Education**
MBA Electives Prerequisite: all MBA foundation courses, 12 credits of MBA core courses and consent of the graduate program director. Designed to complement and extend the classroom learning experiences through the application of theories and concepts in a professional work environment. A deliverable project, designed in consultation with a faculty member, and a
minimum of 200 hours with a participating employer during the semester are required.

CHEM – Chemistry

**CHEM 5251 Organic Preparations**
Prerequisite: CHEM 3151 or 4250. Advanced experiments in organic chemistry using special apparatus and techniques. Two three-hour laboratories per week. Offered on demand.

**CHEM 5321 Biochemistry II**
Prerequisites: CHEM 4420 or 5420. Continuation of Biochemistry I, covering energy generation, metabolism of lipids and amino acids, integration of metabolism, DNA replication and repair, transcription, translation, and control of gene expression. Dual-listed in the UALR Undergraduate Catalog as CHEM 4321. Students who have completed CHEM 4321 may not enroll in CHEM 5321. Lecture three hours per week. Three credit hours.

**CHEM 5330 History of Chemistry**
Prerequisite: CHEM 3350 with C or greater. This course is a survey of the growth and development of chemistry. Lectures will stress connections of modern commiserate to past chemists/scientists and how ideas are passed from generation to generation. The personality and human side of the scientists will be emphasized along with the interactions between science and society. Dual-listed in the UALR Undergraduate Catalog as CHEM 4330. Students who have completed CHEM 4330 may not enroll in CHEM 5330.

**CHEM 5340 Inorganic Chemistry**
Prerequisite or co-requisite: CHEM 3340, and 3572 or 3371 (3371 may be taken as corequisite). A study of inorganic chemistry with detailed emphasis on chemical bonding of covalent molecules, transition metal complexes and their bonding theories, spectroscopy of inorganic complexes, magnetism, organometallic chemistry with catalysis, and introduction to bioinorganic chemistry. Laboratory will reinforce concepts developed in lecture. Required for BS major. Dual-listed in the UALR Undergraduate Catalog as CHEM 4340. Students who have completed CHEM 4340 may not enroll in CHEM 5340. Lecture two hours and laboratory three hours per week. Three credit hours.

**CHEM 5342 Environmental Chemistry**
Prerequisites: CHEM 3350 and CHEM 2310 with grade of C or greater. A survey of environmental chemistry. Topics covered will include: Composition of the atmosphere and behavior; energy and climate; principles of photochemistry and surfactants; halloorganics and pesticides, water and air pollution (tropospheric and stratospheric) and connections to climate change; elemental and molecular environmental chemistry in geological media; water cycle and water treatment; principles of nuclear chemistry and radiochemistry; nuclear environmental chemistry; and evaluation of energy sources that are sustainable. Dual-listed in the UALR Undergraduate Catalogs CHEM 4342 may not enroll in CHEM 5342. Lecture three hours per week. Three credit hours.
**CHEM 5350 Intermediate Organic Chemistry**  
Prerequisite: CHEM 3351. Reaction mechanisms; correlation of structure with reactivity; literature survey of recent advances in the field. Three hours lecture per week. Offered on demand.

**CHEM 5360 Medicinal Chemistry**  
Prerequisites: General Organic Chemistry I and II, CHEM 3350 and 3351, General Organic Laboratory I CHEM 3151, and General Organic Laboratory II CHEM 3151 or Qualitative Organic Analysis Laboratory CHEM 3250, all with grades of C or greater. This course will serve as an introduction to the chemistry and theory of drug action that includes general drug design, drug-receptor interactions, drug design through enzyme inhibition, pharmacokinetics, and drug metabolism. Additionally, the mechanism of specific drug classes will be examined. Lecture three hours per week. Three credit hours. This course cannot be used as a substitute for the Biochemistry requirement of the ACS certified degree.

**CHEM 5380 Introduction to Polymer Chemistry**  
Prerequisites: CHEM 3151 and 3351 or 4250 (recommended but not required: Chemistry 3170, 3271, 3371, 3470, 3572). Coordination of theoretical, practical aspects; includes history, types of polymerizations, kinetics, molecular weight, physical properties including thermal and spectroscopic characterization, biopolymers, engineering resins. Two hours lecture, three hours laboratory per week. Offered in spring on even years.

**CHEM 5399 Special Topics in Chemistry**  
Prerequisite: consent of instructor. Topics may include chemical carcinogenesis, environmental chemistry, solid state chemistry, radiochemistry, macromolecules, surface chemistry, quantum chemistry, others. Three hours lecture per week. Offered on demand.

**CHEM 5411 Instrumental Analysis**  
Prerequisites: CHEM 2310 and 2311; PHYS 1322 or 2322. Most common modern instrumental methods of analysis; includes topics in spectroscopy, electrochemistry, chromatography. Three hours lecture, one four-hour laboratory per week. Offered in fall.

**CHEM 5420 Biochemistry I**  
Prerequisites: CHEM 2510, 3151, 3351. Basic chemistry and metabolism of proteins, lipids, carbohydrates, nucleic acids; action of vitamins, hormones, enzymes. Three hours lecture, three hours laboratory per week. Offered in spring.

**CHEM 7190 Graduate Seminar**  
Prerequisites: graduate standing, consent of thesis advisor and graduate coordinator. Students, faculty, and invited speakers will present, discuss, and exchange ideas on research topics of chemical interest. Required of the MS student. Credit must be received at least one semester before enrollment in the last research semester. One hour session per week. Course may not be repeated for credit. Graded credit/no credit. Offered in fall and spring.
CHEM 7240 Inorganic Preparations
Prerequisite: CHEM 4411/5411 or equivalent. Techniques of synthesis and identification of inorganic compounds. Six hours laboratory per week. Offered on demand.

CHEM 7311 Advanced Analytical Chemistry
Prerequisite: CHEM 4411/5411 or equivalent. Complex solution equilibria and selected topics in spectroscopy, electro-analytical techniques, separations procedures. Three hours lecture per week.

CHEM 7317, 7318, 7319 Selected Topics in Analytical Chemistry
Prerequisite: consent of instructor. Topics may include electro-analytical techniques, modern functional group analysis, instrumental design and control, others. Offered on demand.

CHEM 7340 Advanced Inorganic Chemistry
Prerequisite: CHEM 4340/5340 or equivalent. Advanced theoretical concepts; includes atomic structure, molecular and solid structures, bonding, ligand field theory, organometallic chemistry, metals chemistry, reaction mechanism. Three hours lecture per week.

CHEM 7347, 7348, 7349 Selected Topics in Inorganic Chemistry
Prerequisite: CHEM 4340/5340. Topics may include magnetochemistry, X-ray crystallography, chemistry of diamond-like semiconductors, chemistry of rare earth elements, chemistry of boron and its compounds, reaction mechanisms, others. Three hours lecture per week. Offered on demand.

CHEM 7350 Organic Reaction Mechanisms
Prerequisites: CHEM 3350 or equivalent, 3351 or equivalent. Reaction mechanisms of classical organic reactions; includes ionic and free radical addition and substitution, oxidation, reduction, elimination reactions. Three hours lecture per week. Offered in fall.

CHEM 7351 Modern Synthetic Reactions
Prerequisites: CHEM 3350 or equivalent, 3351 or equivalent. Modern organic reactions, their applications in synthesis. Three hours lecture per week. Offered on demand.

CHEM 7357, 7358, 7359 Selected Topics in Organic Chemistry
Prerequisites: CHEM 3350, 3351. Topics may include natural products, stereochemistry, photochemistry, heterocyclic compounds, free radicals, carbenes, polymers, others. Three hours lecture per week. Offered on demand.

CHEM 7370 Physical Principles of Chemical Reactivity
Prerequisites: CHEM 3371 or equivalent, 3470 or equivalent. Chemical, physical properties of selected species in terms of thermodynamics, kinetics, molecular structure; examples in scientific literature illustrate how physical chemistry principles may be applied to chemical reactivity. Three hours lecture per week. Offered in spring.
CHEM 7371 Chemical Thermodynamics
Prerequisites: CHEM 3371, 3470. Application of the three laws of thermodynamics to chemical systems; relates spontaneity and equilibrium in gaseous, heterogeneous-phase, and solution reactions to thermal, electrochemical measurements. Three hours lecture per week. Offered on demand.

CHEM 7372 Chemical Kinetics
Prerequisites: CHEM 3371, 3470. Chemical reaction rates; includes determination of empirical rate laws, collision and transition state theories, activation energy and catalysis, reaction mechanisms, kinetic intermediates. Three hours lecture per week. Offered on demand.

CHEM 7377, 7378, 7379 Selected Topics in Physical Chemistry
Prerequisites: CHEM 3371, 3470. Topics may include quantum chemistry, statistical thermodynamics, semi-empirical molecular orbital calculations, molecular spectroscopy and photochemistry, states of matter, mathematical methods in chemistry, others. Three hours lecture per week. Offered on demand.

CHEM 7390 Selected Topics for Teachers
Prerequisites: experience in teaching secondary science and/or consent of instructor (based on assessment of student’s chemistry background). For secondary science teachers to improve and extend their knowledge of basic chemical concepts. These concepts are related to modern chemical topics wherever possible. Laboratory emphasizes techniques for conducting classroom demonstrations. Two hours lecture, three hours laboratory per week. Offered on demand.

CHEM 8100-8400 Thesis Research
Prerequisites: consent of coordinator, thesis advisor. Scholarly investigation of a selected chemical problem, culminating in a written thesis with oral defense; student presents a seminar on the research in the last course/hours, typically during the final semester, to faculty and fellow students. Eleven hours required for MS degree. May not be applied to the MA degree. Variable credit. Credit/no credit grade based on written progress reports.

CNMG 5329 Construction Planning and Scheduling
Prerequisite: CNMG 4211 or equivalent. An in-depth study of the process of creating and monitoring a construction project schedule. Creation of project schedules on a variety of scheduling software, with primary focus on Primavera. Three hours lecture. Three credit hours. Dual-listed in the UALR Undergraduate Catalog as CNMG 4329. Students cannot receive graduate credit for CNMG 5329 if they have previously taken CNMG 4329.

CNMG 5334 Construction Contracts and Law
A study of construction contracts in relation to project delivery systems and the basic principles of construction law. Case studies are used to analyze selected areas that affect the construction
process. Topics include standard agreements and conditions, negligence, risk, indemnities, modifications, mechanics lien, claims, dispute resolution, conflicts of interest, ethical consideration, and labor law. Three hours lecture. Three credit hours. Dual-listed in the UALR Undergraduate Catalog as CNMG 4334. Students cannot receive graduate credit for CNMG 5334 if they have previously taken CNMG 4334.

**CNMG 5342 Construction Safety**
A study of the principles of construction safety management and OSHA 29 CFR PART 1926. The OSHA Construction Industry Training Course 500 topics covered in depth. Students develop a company safety plan and hazardous communications program, perform safety analysis, conduct safety meetings, and write accident investigation reports. Students complete the topic requirements for the OSHA 10-hour and 30-hour Construction Safety and Health training card. Two hours lecture and two hours lab. Three credit hours. Dual-listed in the UALR Undergraduate Catalog as CNMG 4342. Students cannot receive graduate credit for CNMG 5342 if they have previously taken CNMG 4342.

**CNMG 5361 Green Construction**
Overview of design and construction delivery systems for high performance green buildings; relevant criteria and established guidelines; green standards; high performance green buildings and sustainability; vocabulary associated with sustainability and green buildings; physical limitations of materials. Three hours lecture. Three credit hours. Dual-listed in the UALR Undergraduate Catalog as CNMG 4361. Students cannot receive graduate credit for CNMG 5361 if they have previously taken CNMG 4361.

**CNMG 5389 Professional Engineering Licensure**
Prerequisite concurrent: Registration for the Fundamentals of Engineering exam, or consent of instructor. Legal, regulatory, and ethical issues related to the practice of engineering; preparation for engineering licensure examinations. Two hours lecture. Three hours lab. Three credit hours. Cross listed as SYEN 5389. Dual-listed in the UALR Undergraduate Catalog as CNMG 4389. Students cannot receive graduate credit for CNMG 5389 if they have previously taken CNMG 4389.

**CNMG 7100, 7200, 7300 Independent Study**
Topic and method of procedure must have approval of the supervising faculty member. Typically four to six hours per week of work on the project for each hour of credit earned. The exact hourly commitment per week and credit hour value depends on the nature of the project and must be agreed on in advance by the student and instructor, and must be submitted in writing to the student’s graduate advisor. With approval, may be repeated for up to nine credit hours. One to three credit hours.

**CNMG 7318 BIM and 4D Simulation**
Prerequisite: CNMG 4218 or equivalent. Advanced techniques of using Building Information Modeling (BIM) together with scheduling control to do 4D simulation. Potential applications of computer and information systems in construction industry. Three hours lecture. Three credit
hours.

**CNMG 7345 Applied Construction Management**
Prerequisites: CNMG 4211 and CNMG 5329 or equivalent, or consent of the instructor. This course discusses design, development, estimating, scheduling, contracting, and administering small construction projects, including extensive site and feasibility analyses. Three hours lecture. Three credit hours.

**CNMG 7376 International Construction Business Management**
Construction contracting, with emphasis on international economics, marketing, contracts, design, and specifications. Issues of local construction techniques, construction marketing, international construction, sustainability, global economics, and influence on construction of local culture, traditions, architecture, history, and political climate. Three hours lecture. Three credit hours.

**CNMG 7385 Construction Management Graduate Project**
Prerequisites: graduate standing, completion of at least 18 graduate credit hours in the MS in construction management program, or consent of the advisor. Students, under faculty supervision, will work on practical problems related to construction management, and will submit a project report documenting the results. Three credit hours.

**CNMG 7399 Special Topics**
Prerequisites: Consent of instructor. Selected advanced topics in construction. Three hours lecture. Three credit hours.

**CNMG 8100, 8200, 8300, 8400, 8500, 8600 Construction Management Master’s Thesis**
Prerequisites: graduate standing, completion of at least 18 graduate credit hours in the MS in construction management program, or consent of the thesis advisor. Scholarly investigation of a selected problem in an area related to construction management culminating in a written thesis and an oral defense. A maximum of six hours may be applied toward the MS degree. Variable credit of one to six hours.

**CNSL – Counselor Education**

Prerequisite for all courses: graduate standing and approval of program coordinator.

**CNSL 7109, 7209, 7309 Independent Study**
Prerequisites: graduate standing, consent of advisor. Topics of individual interest; might include aging, at-risk children, adolescence, handicapped children, child abuse, children of divorce, single parent families, ethics, children of alcoholic families, etc. One to three hours credit. Offered on demand.

**CNSL 7206 Orientation to Industry and Occupations**
Includes social, economic perspectives of work world; emerging views of work; various topics related to employability and employment; plant/business tours; shadowing of workers; requires an individual project.

**CNSL 7211 Guidance and Counseling Fundamentals for Educators**
(Course for non-majors) Issues, functions, scope of guidance, counseling program in public education setting; programmatic components, counselor roles; counseling, delivery of services in multi-ethnic setting.

**CNSL 7300 Foundations for School Guidance and Counseling Programs**
Pupil services; includes pupil personnel services, models of guidance, the professional school counselor, pupil populations with special needs; emphasis on history, philosophy, organization, functions of guidance and counseling programs in the schools.

**CNSL 7301 Counseling Theories and Applications**
Experiential, relationship-oriented, cognitively-oriented, behaviorally-oriented approaches to counseling; emphasis on counselor as an instrument of counseling, development of a personal theory of counseling, legal and ethical responsibilities of counselors.

**CNSL 7302 Models and Techniques for Counseling Interviews**
Prerequisite: CNSL 7301. Techniques, procedures for counseling interviews; emphasis on mastery of levels of skills within a microskills hierarchy for counseling interviews, appropriate use of skills in various stages of counseling.

**CNSL 7303 Career Development, Planning, and Information Services**
Theoretical approaches to career development, planning; includes career development theories, planning, education, guidance models; needs of special populations, delivery systems.

**CNSL 7305 Appraisal Resources and Services in Counseling**
Emphasis on appropriate selection, administration, uses of a variety of testing, and other techniques; individual analysis; case management in the counseling setting.

**CNSL 7307 Theories and Techniques of Group Counseling**
Prerequisite: consent of instructor. Processes, theories of group counseling; developing personal approach for applying concepts, processes.

**CNSL 7308 Cross Cultural Counseling**
Prerequisites: CNSL 7300, 7301, and 7302, or consent of instructor. Environmental, personal, socio-economic, psychological characteristics of special client (culturally different) groups; counseling theories, techniques applied to culturally different individuals, and groups; emphasis on knowledge, skills in cross-cultural counseling; includes potential sources of misunderstanding investigated from various counseling modes.

**CNSL 7310 Human Sexuality**
Graduate Courses - 2015-2016 Graduate Catalog

Prerequisite: EDFN 7330, CNSL 7300, 7301, and 7302 or consent of instructor. Biological, psychosocial, behavioral, clinical, cultural factors; literature of; skills of communicating knowledge via counseling strategies for human sexual behaviors.

**CNSL 7312 Advanced Cross Cultural Counseling**
Prerequisite: CNSL 7308. This course expands upon the curriculum base in CNSL 7308 Cross Cultural Counseling through the identification of multiple intervention strategies with emphasis on advanced focus on school-aged youth and their families. It includes advanced emphasis on content and process development.

**CNSL 7313 Ethical and Legal Issues in the Counseling**
Profession Review of legal and ethical standards in school and community counseling related to counselor training, research, and practice. Topics include: client rights, confidentiality, the client-counselor relationship, professional relationships, duty to warn, counselor supervision, counseling minors and case law in counseling.

**CNSL 7320 Practicum: Counseling Services-Elementary Education**
Prerequisite: 20 – 24 semester hours completed in the CNSL program and consent of the instructor. Supervised practice in program management, information services, appraisal services in elementary school counseling; focus on operationalizing cognitive content of core courses. Requires 75 clock hours of counseling activities. Students must achieve a (B) or greater before enrolling in an internship.

**CNSL 7321 Practicum: Counseling Services-Secondary Education**
Prerequisite: 20 – 24 semester hours completed in the CNSL program and consent of the instructor. Supervised practice in program management, information services, appraisal services in secondary school counseling; focus on operationalizing cognitive content of core courses. Requires 75 clock hours of counseling activities. Students must achieve a (B) or greater before enrolling in an internship.

**CNSL 7330 Practicum: School Counseling**
Prerequisite: 20 – 24 semester hours completed in the CNSL program and consent of the instructor. Supervised practice in program management, information services, appraisal services in school counseling; focus on operationalizing cognitive content of core courses. Requires 100 clock hours of counseling activities. Students must achieve a B or greater before enrolling in an internship.

**CNSL 7331 Practicum: Counseling-Secondary Education**
Prerequisite: 20 – 24 semester hours completed in the CNSL program and consent of the instructor. Supervised experience in individual counseling, group counseling, case management in secondary schools; emphasis on application of cognitive content, practice of skills. Requires 75 clock hours of counseling activities. Students must achieve a B or greater before enrolling in an internship.
**CNSL 7340, 7640 Internship: School Counseling**
Prerequisite: consent of the instructor. Supervised internship in school setting; requires student involvement in a variety of on-the-job activities; includes program management, appraisal services, information services, case management, individual and group counseling, classroom guidance, teacher consultation, parent consultation, career guidance. Requires 100 clock hours of work per credit hour; 600 hours for degree. May enroll for three hours each of two semesters or six hours in one semester.

**CNSL 7341, 7641. Internship: Counseling Services-Secondary Education**
Prerequisite: consent of the instructor. Supervised practice in secondary school setting; requires student involvement in variety of on-the-job activities; includes program management, appraisal services, information services, case management, individual and group counseling. Requires 50 clock hours of work per credit hour; 300 hours for degree. May enroll for three hours each of two semesters or six hours in one semester.

**CNSL 7399 Thesis**
Prerequisites: 36 hours of graduate credit in counseling and educational foundations including Educational Foundations 7171 and 7303, and consent of the program advisor. Development of a formal research project; content determined in conjunction with a faculty committee chosen by the student. May be repeated for six hours total.

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**COUN – Counseling: Rehabilitation Counseling**

**COUN 7190, 7290, 7390 Independent Study**
Prerequisites: graduate standing, consent of instructor. Students under faculty supervision, can explore advanced topics in rehabilitation counseling not normally covered in regular course offerings.

**COUN 7360 Rehabilitation Foundations**
The purpose of this course is to provide both a broad foundation for students beginning their journey into the profession of rehabilitation and a broad-based reference for current practitioners. The content provides a conceptual overview of the professional, historical, theoretical, research, and applied foundations of the rehabilitation profession as they relate to the services for individuals with disabilities.

**COUN 7361 Medical Aspects of Disability**
Prerequisites: COUN 7360 or the consent of the instructor. This is a course that covers the medical aspects of disability. Managing the medical aspects and functional assessment of frequently occurring medical diseases and disorders of older adolescents and adults are stressed. Topics include the medical aspects and functional assessment of neurological/cognitive/neuromuscular disorders, psychiatric/developmental disabilities, sensory losses, and various acute and chronic physical diseases and disorders. Case management activities and a process for determining the educational/rehabilitation implications of the effects of each disability
COUN 7362 Psychological Aspects of Disability
Prerequisites: COUN 7360 or the consent of the instructor. This course outlines the psychological and sociological aspects of disability, including community attitudes toward individuals with disabilities, strategies to change negative attitudes, adjustment factors in living with disabilities, and methods for supporting successful adjustment to disabilities.

COUN 7363 Career Counseling and Placement
Prerequisites: COUN 7360 or the consent of the instructor. The purpose of this course is to provide students with theories and techniques for empowering adults with disabilities to obtain integrated, community-based employment from a career decision making perspective.

COUN 7364 Rehabilitation Case Management
Prerequisites: COUN 7360, COUN 7361, COUN 7362, COUN 7367 or the consent of the instructor. This course is a study in case management in rehabilitation which is a skill that rehabilitation professionals must possess in order to successfully guide clients through the rehabilitation process from referral to case closure. It provides guidelines that will enable rehabilitation professionals to collect information from the intake interview, physician, psychologists, vocational evaluation, and other resources, in an effort to develop appropriate ethical rehabilitation plans with clients.

COUN 7365 Rehabilitation Counseling Practicum
Prerequisites: Must have completed all phase 1 courses and should have completed all core courses or consent of the program fieldwork supervisor. The purpose of this course is to provide students initial exposure to learning in a community based rehabilitation agency under faculty supervision. The course is designed to give the student an opportunity to practice the role of a rehabilitation professional. The student will apply rehabilitation counseling methods, techniques and vocational knowledge in working with clients and in consulting with business and industry for job development and placement opportunities. One-hundred contact hours in a fieldwork setting is required.

COUN 7367 Assessment in Rehabilitation
Prerequisites: COUN 7360 and EDFN 7303 or the consent of the instructor. The purpose of this course is to provide students with theories and techniques for empowering adults with disabilities to explore their aptitudes, interests, and other vocational assessments areas that assist them in career decision making.

COUN 7368 Foundations of Substance Abuse
This course focuses on substance abuse and coexisting disabilities from the perspective of risk and the challenges to rehabilitation practice. It provides the student with an in-depth understanding of substance abuse, drugs of abuse, patterns of abuse and consequences of abuse. Treatment models and needs are addressed from the rehabilitation model. New legislation and contemporary issues are presented to support the examination of the impact of policy on
treatment and rehabilitation. The role of employment and the challenges of recovery and the
return to employment are examined, within a comprehensive plan for relapse prevention. This
course utilizes a diverse range of on-line resources as well as personal stories relating the
challenges and dynamics of the recovery process.

COUN 7369 Introduction to Family Counseling
This course will provide knowledge about work with couples and families. This course will include
understanding and application of general systems theory and the major schools of family theory.
Methods for working with families with a disabled family member will be presented.

COUN 7370 Psychopharmacology for Counselors
A course intended to cover the areas of Psychopharmacology and the application of medication to
all the major diagnostic categories contained in DSM-IV-TR. This course is intended for non-
prescribing professionals.

COUN 7660 Internship in Rehabilitation Counseling
Prerequisites: The completion of all course work in the core and professional experience areas and
the approval of the department faculty. The internship consists of advanced field work in
rehabilitation counseling in an off campus field site placement. The Commission on Rehabilitation
Counselor Certification requires 600 hours of applied experience in a rehabilitation agency or
facility under the supervision of an experienced certified rehabilitation counselor on-site or facility
supervisor. This course will provide a minimum of 300 of those field work hours. The course may
be taken twice in the same semester to meet the 600 hour requirement. Completion of the
second section of this course requires passing grade on the certified rehabilitation counselor (CRE) exam.

CPSC – Computer Science

CPSC 5360 Computer Security
Prerequisites: Graduate standing. Increasing reliance on our computer based infrastructure
elements along with the information driven nature of today’s business require a solid and in-dept
understanding of security issues pertinent to these systems. The topics include threats,
assumptions, assurance, confidentiality, integrity, availability, access control matrix and policies,
security models, requirements imposed by policies, protection models, covert channels, formal
methods for security, designing and evaluating systems, intrusion detection, auditing, and other
contemporary issues. Three hour lecture; three credit hours. Not open to students with credit for
CPSC 4360.

CPSC 5366 Interactive Computer Graphics and Animation
Prerequisites: Graduate Standing. Knowledge of C, C++ or Java Programming. Approval from the
instructor. This course introduces computer graphics and all details of the design of modern
graphic architecture. The topics covered include two – and three – dimensional modeling and
transformation, lighting and shading, animation techniques, and an introduction to OpenGL.
Three hours lecture; three credit hours. Not open to students with CPSC 4366.

**CPSC 5372 Object-oriented Programming**
Prerequisites: working knowledge of a procedural programming language and UNIX operating system, or consent of the instructor. Concepts of object-oriented analysis, design, and implementation. Object-oriented programming in C++, Smalltalk, Java, and/or another current object-oriented programming language. Graduate Standing. This is a foundational course that covers fundamentals of modern software engineering. Topics included are: requirements definition, analysis, and modeling including use cases and use case paths, domain names, state transition diagrams; techniques to increase robustness and avoid disastrous defects; object oriented architecture and design patterns and specification in UML; performance impact of design choices; analysis of designs regrading maintainability and testability; security engineering; practical system test and glass – box testing fundamentals; verification of test coverage via decision tables and state transition tables. Three hours lecture per week. Three credit hours. Not open to students with credit for CPSC 4373.

**CPSC 5376 Applied Cryptography**
Prerequisites: CPSC 2380, MATH 2310, and STAT 3352 or equivalents. A survey and study of the major cryptographic techniques, algorithms, and implementations, with emphasis on applications to communications and network security. Intended as a practical introduction to the current state-of-the-art of cryptographic usage. Three hours lecture. Three credit hours.

**CPSC 5199-5499 Special Topics**
Prerequisites: graduate standing, consent of instructor. Various topics in applied computer science, selected from the areas of intelligent systems and computer systems design. On demand.

**CPSC 5373 Fundamentals of Software Engineering**
Prerequisites: graduate standing, consent of instructor. Various topics in applied computer science, selected from the areas of intelligent systems and computer systems design. On demand.

**CPSC 5381 Computer Architecture and Design**
Graduate Standing. This course addresses the architecture and design of modern microprocessor computers. In it adheres to the principle of “no mysteries” and reveals all the details of the design of modern pipeline microprocessor system. The topics covered include formal description of computer architecture and design, instruction set architectures, processor design of modern computers, pipeline and instruction level parallelism, memory system design, and input and output systems. Not open to students with credit for CPSC 4381.

**CPSC 5382 Compiler Construction and Theory**
Prerequisites: Graduate Standing. The fundamental principles of compilers such as finite state machines, context free grammar, are studied. The compilation techniques covered include compile and run- time symbol tables, lexical analysis syntax analysis, semantic analysis, object
code generation, error diagnostic and optimization. Three hours lecture. Three credit hours. Not open to students with credit for CPSC 4382.

**CPSC 5384 Computer Networks**
Prerequisites: Graduate Standing. This course is an introduction to the design and analysis of computer networks. The course covers a breadth of topics including computer communications architecture and protocols, local and wide area networks, IP networks, bridging and routing, Ethernet, wireless LANs, sockets programming, and distributed applications. Three hours lecture; three credit hours. Not open to students with credit for CPSC 4382.

**CPSC 5388 Smart Software Systems**
Prerequisites: Graduate Standing. Ability to perform independently and as a team member is absolutely essential. A working knowledge of C, C++, Java and a course in digital logic/assembly language programming is very much desired. This class will involve extensive independent work with your group and the instructor to plan and implement an embedded software systems project. Three hours lecture; three credit hours. Not open to students with credit for CPSC 4388.

**CPSC 7101 Research Methodology**
Prerequisites: Graduate Standing. A one-credit course in a set of three, introducing students to the research methodology of doctoral level research in the Integrated Computing field. Research examples will be drawn from work that exemplifies the interconnecting research opportunities across the Integrated Computing discipline.

**CPSC 7102 Research Tools**
Prerequisites: Graduate Standing. A one-credit course in a set of three, introducing students to the research methodology of doctoral level research in the Integrated Computing field. Research examples will be drawn from work that exemplifies the interconnecting research opportunities across the Integrated Computing discipline.

**CPSC 7103 Research Application**
Prerequisites: SYEN / IFSC / CPSC 7101 and 7102. A one-credit course in a set of three, introducing students to the research methodology of doctoral level research in the Integrated Computing field. Research examples will be drawn from work that exemplifies the interconnecting research opportunities across the Integrated Computing discipline. Students may with permission of the other Graduate Coordinator concurrently enroll in this course with either SYEN / IFSC /CPSC 7101 or 7102.

**CPSC 7190 Graduate Seminar**
Prerequisite: Graduate Standing. A weekly expository lecture series by the faculty and invited speakers on current research areas.

**CPSC 7301 Essentials of Computer Software**
Prerequisites: Graduate Standing with an engineering or science degree and at least one programming language of C, C++ or Java. This course introduces students to important concepts
and techniques in developing software and internet based applications. Topics include: programming language paradigms, data structures, algorithms and programming environments: compiled versus interpreted environments, web based languages and scripting techniques, data access techniques and support for secure protocols, methods for querying and updating structured web documents and semi structured data. Language issues in the development and management of commercial projects, etc. This course and CPSC 7302 will prepare the science or engineering graduates for the computer science master program and the credit of this course is not counted towards the requirement of the master program. Three hours lecture and three credit hours.

**CPSC 7302 Essentials of Computer Systems**
Prerequisites: Graduate Standing with an engineering or science degree and at least one programming language of C, C++ or Java. This course takes an integrated approach to cover the major components of the complete computer system: digital logic, computer organization and architecture, programming languages and compilers, and operating systems and computer networks. This course and CPSC 7301 will prepare the science or engineering graduates for the computer science master program and the credit of this course is not counted towards the requirement of the master program. Three hours lecture and three credit hours.

**CPSC 7311 Software Engineering**
Prerequisites: Graduate Standing and a working knowledge of C or C++. An overview of the software development paradigm to include the software life cycle, prototyping and object-orientation; reliability, quality assurance, formal methods, and CASE tools.

**CPSC 7312 Parallel Processing**
Prerequisites: Graduate Standing; CPSC 2380 and CPSC 3482. Concepts of parallel computing, parallel architectures and interconnection networks; parallel programming and applications; basic paradigms and primitives, programming using PVM and MPI; efficient mapping of programs, automatic parallelization of serial code.

**CPSC 7313 Concurrent Software System Architecture**
Prerequisite: CPSC 5373 or permission of the instructor based on an existing background in object orientation methodology. This course covers the internal issues of modern software engineering. Topics include requirements of interface definition, notation, and analysis of systems of programs; software systems architecture issues, synchronization while managing shared data stores, and ensuring the architecture supports performance goals; concurrent task structuring criteria; software architecture patterns for common categories of software systems; concurrency support including enforcing mutual exclusion, engineering for deadlock avoidance, and ensuring liveness; design for testability; architecture performance analysis, performance design patterns, and anti-patterns. Three hour lectures. Three credit hours.

**CPSC 7314 Integrated Software System Engineering**
Prerequisites: CPSC 4373/5373. This course covers the integration related issues of modern software engineering. Topics include but not limited to specification of use cases for a distributed
application; design and development concerns such as fault tolerance, reliability, security, interoperability; how these concerns influence the placement of functionality in the distributed environment—subsystem structuring criteria; design that allows upgrades and modifications of installed distributed systems; representation of timing sequences; performance analysis of concurrent and distributed systems; design for testability; distributed architecture design patterns; other issues about testing distributed systems. Three hour lectures. Three credit hours.

**CPSC 7321 Operating Systems**  
Prerequisites: CPSC 3380 and 3482; working knowledge of C, C++, or Java Programming Language, and UNIX. Advanced topics in operating systems; process synchronization, deadlock, concurrency; fault tolerance, protection and security; distributed operating systems, multiprocessor operating systems.

**CPSC 7322 Distributed Systems**  
Prerequisites: CPSC 3380 and 3482; working knowledge of C, C++, or Java Programming Language, and UNIX. Foundations of distributed operating systems; design and implementation of distributed systems; communication methods for open systems; kernel facilities; file management, naming and lock synchronization; transactional services for shared data.

**CPSC 7325 Software Security Assessment**  
Prerequisite: CPSC 5360 or Consent of Instructor. Today’s networked and complex software not only increases number of potential vulnerabilities but also increases risk associated with vulnerabilities. The industry-specific regulations further necessitate building software with the minimum number of vulnerabilities. This course delivers the know-how of dealing with software vulnerabilities. The topics covered include Software Vulnerability Fundamentals, Auditing and Black Box Testing, Design, Implementation, and Operational Vulnerabilities, Design and Operational Review, Attack Surface; Insecure Defaults; Access Control; Secure Channels, Application Review Process, Code-Auditing Strategies, Software Vulnerabilities, Assessing Memory Corruption, Synchronization and State, Vulnerabilities in Practice, Documentation of Findings.

**CPSC 7326 Malware Analysis**  
Prerequisite: CPSC 4360/5360 or Consent of Instructor. Malware, despite the wide-spread use of anti-malware tools, still persists to exist in large-scale. Malware outbreaks can cost businesses large sums of money through business disruption, harming reputation, and recovery efforts. This class offers a thorough analysis of Malware including cutting edge techniques to detect and deal with it. Topics covered include History and Prevalence of Malicious Code, Types of Malicious Code, Infection Mechanisms and Targets, Virus Propagation Mechanisms, Defending against Viruses, Worms and Worm Components, Impediments to Worm Spread, Super Worms, Malicious Mobile Code, Backdoors, Polymorphic Malware, Rootkits, Process for Malware Analysis.

**CPSC 7331 Computer Architecture**  
Prerequisite: CPSC 3482. A study of computer architecture fundamentals; the impact of technology on architecture cost and performance; Instruction Set Architecture; design and
analysis of the building blocks of computer systems, including data path, control, and memory hierarchy; recent architectural developments.

**CPSC 7332 Advanced Computer Architecture**
Prerequisite: CPSC 7331. An in-depth study of recent advances in computer architecture; speedup architectural techniques for high performance computer systems; caches and memory hierarchy; RISC and Superscalar computer architectures.

**CPSC 7333 VLSI Design**
Prerequisite: CPSC 3482. This course introduces the principles of CMOS VLSI technology and design; design methodologies from concept to implementation of VLSI chips; Mentor Graphics and Cadence software packages that support design, layout, and verification.

**CPSC 7334 Digital Systems and Hardware Design Languages**
Prerequisites: Computer Science 3482 and working knowledge of . Architecture of a representative 32-bit processor, system building blocks, design conventions; HDL languages; modeling, simulation and verification of the representative processor.

**CPSC 7341 Telecommunications and Networking**
Prerequisite: Graduate Standing. Fundamentals of data communications; topologies and transmission media; protocol architecture; LAN, MAN, and WAN systems; network design issues.

**CPSC 7342 Advanced Computer Networking**
Prerequisite: CPSC 7341. Advanced concepts of computer networks; network hardware and software; preference models; data communications services; network standardization; design issues and their applications.

**CPSC 7343 Sensor Networks**
Prerequisites: CPSC 4384/5384. This course aims to develop fundamental understanding of sensor network systems. It covers architectures and communications protocols for sensor networks. Node and network architectures, naming and addressing, time synchronization, localization and positioning, topology control, and content-based networking are all covered. At the completion of the course, students will understand how sensor networks work as intelligent and coordinated systems.

**CPSC 7351 Database Design**
Prerequisite: CPSC 2380 and 3375, Mathematics 2310. Design process, objectives, techniques, syntactic and semantic analysis design; entity relationships model, binary and n-ary relationships, minimality of relations, recursive relationships, role-modeling structures, aggregate objects, conversion methods, implementation models, evaluating design, choosing design methodologies.

**CPSC 7352 Advanced Database Issues**
Prerequisite: CPSC 7351. Advanced issues in distributed databases, transaction systems,
database machines, database mining, expert database systems, object-oriented databases, and extended data models.

**CPSC 7361 Computer Graphics**
Prerequisites: MATH 1305; working knowledge of C programming. Introduction to computer graphics and graphic systems; output primitives and attributes; two-dimensional graphics: geometric transformations, viewing; three-dimensional graphics: object representation, geometric and modeling transformations and viewing; illumination models and animation; user interface and interactive input.

**CPSC 7362 Advanced Computer Graphics**
Prerequisite: CPSC 7361. Advanced concepts in two-dimensional graphics and three-dimensional graphics; object representations, geometric and modeling transformations, viewing, NURBS curves and surfaces; texture mapping, visible-surface detection methods, advanced illumination and shading models, color models and color applications; advanced animations.

**CPSC 7373 Artificial Intelligence**
Prerequisites: CPSC 2380; MATH 1305 or MATH 1312. Undergraduate course work in artificial intelligence would be beneficial but is not required. Study of the major areas of artificial intelligence, including general problem solving, search strategies, heuristics, knowledge representation, machine learning, games, scene analysis, expert systems, robotics, natural language processing, and AI languages.

**CPSC 7374 Image Processing**
Prerequisites: MATH 1305 or MATH 1312 and a working knowledge of C programming. Study of digital image fundamentals; transformation enhancement, restoration, segmentation, compression, encoding, representation, and description of digital images.

**CPSC 7398 Graduate Project**
Prerequisites: Graduate Standing and consent of the student’s graduate advisor. Students, under faculty supervision, will conduct directed research on a particular problem or area of computer science in some depth, and will produce an appropriate project and report based on their investigations.

**CPSC 7399 Selected Topics**
Prerequisites: Graduate Standing, consent of instructor. Various topics in applied computer science, selected from the areas of intelligent systems and computer systems design. Offered on demand.

**CPSC 7100 – 7400 Independent Study**
Prerequisite: Graduate Standing, instructor permission. Provides an opportunity for doctoral students to learn material relevant to their research that is not offered in a regular course. Students must take this course with an instructor who will guide the study. A copy of work done in the course will be submitted at the end of the semester.
CPSC 8100-8600 Thesis
Prerequisite: Consent of thesis advisor. Scholarly investigation of a selected problem in computer science culminating in a written, orally defended thesis. Maximum of six hours may be applied to M.S. Variable credit of one to six hours.

CRJU – Criminal Justice

CRJU 5300 Crime and Behavior
Contemporary criminological theories of factors contributing to crime and social disorder.

CRJU 5301 Judicial Process and Behavior
Literature on topics such as judicial selection, impact of court decisions, court procedure, factors affecting decision-making behavior of judges.

CRJU 5302 Law and Society
Role of law in modern society; emphasis on legal theories shaping U.S. legal system, theories of justice, legal reasoning, and application of these theories to real-world problems as introduction to the role of law in helping settle social conflicts.

CRJU 5380 Comparative Criminal Justice Systems
Law enforcement, judicial, correctional systems of other nations; emphasis on comparison with U.S.

CRJU 7300 Criminological Theory
Original works of criminological theorists from biological, psychological, sociological, and political perspectives; empirical, methodological adequacy of theories and literature; current application as viable explanation of criminal behavior.

CRJU 7301 Pro-seminar
A critical examination of the theoretical, methodological, and policy issues in criminal justice and criminology. Explores organized knowledge about enduring theoretical and policy questions concerning crime and justice; examines the theoretical foundations of crime control, the relationship between criminal justice agencies, and the relationship between the criminal justice system and its social, political, and economic environments. Also provides students with an overview of criminal justice in higher education and requirements of a graduate education.

CRJU 7303 Criminal Justice Systems
This course will discuss the major functional components of the criminal justice system from the historical, philosophical and system perspectives. It will analyze the interrelationships among components, and identify the impact of social and political forces on roles and functions of criminal justice agencies.

CRJU 7304 Criminal Justice Policy
This course is designed to prepare students to understand and influence policy issues in criminal justice. The course will build upon the CJ systems course to provide a base of knowledge in policy analysis, policy research, and working within the system for policy change. This course will be specific to criminal justice policy issues, and will prepare students to complete their public policy thesis.

**CRJU 7305 Seminar in Criminal Law**
Major concepts of criminal law; includes various states’ approaches to definitions of crimes, criminal responsibility, criminal defenses.

**CRJU 7320 Applied Research and Analysis**
Examines the major concepts, techniques, and application of statistical methods in criminal justice. Topics include understanding when statistical techniques are appropriate, interpretation of results, organization and presentation of numerical information, and introduction to descriptive statistics.

**CRJU 7321 Criminal Justice Organizations and Management**
An overview of major theories of criminal justice organizations and management. The course will center on police and correctional organizations but may be applied to any criminal justice organization. Among the topics studies are leadership, personnel, organizational and political environments, and organizational development.

**CRJU 7322 Foundations of Policing**
Specific aspects of American police agencies’ organizational patterns, administrative problems, community issues, internal role systems.

**CRJU 7323 Ethics in Criminal Justice**
Overview of ethical theory, doctrines, and controversies in the field of criminal justice. Emphasis is placed on the dilemmas faced by criminal justice practitioners and supervisors seeking to make appropriate ethical judgments and decisions that are in keeping with the goals of justice.

**CRJU 7324 Human Resource Management**
A number of recent developments, including demographic changes in the labor force increased global competition, experiments with new organizational arrangements, and public policy attention to work force issues have made human resource management increasingly important for law enforcement and correctional managers. This course will cover a broad range of topics associated with HR management specific to the domain of law enforcement and corrections from differing perspectives. Topics covered will include recruiting/selection of employees; training, motivation, and evaluation; retention; discipline and termination; EEO; policy development, and implementation; legal issues and civil liability.

**CRJU 7325 Cyber Crime and Information Systems Security**
Provides a foundation for the use of Geographic Information Systems (GIS) in analyzing data and making policy decisions. Topics include the use of GIS as a visual representation of demographic
and infrastructure data, using GIS to summarize information, and use of GIS computer software.

**CRJU 7326 Public Budgeting**
Budgeting touches every aspect of the public sector, demanding that anyone concerned with policy making and implementation understand how the process works. This class covers the terminology, components, practices, documents and methods of public budgeting and finance at all levels of government and in the non-profit world. Among other things, students will gain an understanding of the budget process, prepare basic budgets, practice using budget documents to do analysis, learn how to evaluate an organization’s finances using financial reports, and write a financial analysis.

**CRJU 7330 Capstone**
The criminal justice capstone course is designed to assist students in the integration and synthesis of their graduate experiences from both a theoretical and policy framework. The end product, a Capstone Paper, will provide a means for demonstrating mastery of the discipline and a vehicle for future work and study in the criminal justice profession.

**CRJU 7331 Community-Based Corrections**
Traditional correctional functions; emphasis on development of community diversion and residential programs, involvement of correctional programs in the community.

**CRJU 7340 Correctional Administration**
Problems with control and treatment of offenders in institutional correctional settings.

**CRJU 7341 Teaching Practicum**
Prepares students to teach criminology/criminal justice courses. Covers aspects of presentation, pedagogical issues, giving and grading tests, and handling problem students. Also addressed will be expectations and activities involved in being a faculty member.

**CRJU 7360 Deviant Behavior**
See Psychology 7360.

**CRJU 7361 Social Psychology**
See Psychology 7361.

**CRJU 7370 Juvenile Delinquency Problems**
Topics related to juvenile delinquency and prevention in the juvenile justice system.

**CRJU 7390 Independent Study**
Prerequisites: graduate standing, consent of program coordinator. Intensive research under faculty supervision or practical experience in a selected criminal justice agency. Requires completion of a research paper.

**CRJU 7391 Social Statistics**
Logic, uses of statistical analysis in social science research; focus on statistical design of research projects, analysis of computer-generated output, statistical procedures and results; critique of statistical adequacy of related literature.

**CRJU 7392 Research Methods in Criminal Justice and Criminology**
Methods and techniques of research in the behavioral sciences. Includes an in-depth analysis of the conceptualization of research and the design of appropriate research strategies. Topics covered include experimental design, questionnaire construction, observational techniques, and qualitative research designs.

**CRJU 7393 Seminar on Special Topics in Criminal Justice**
Crucial criminal justice topic determined by student interest, available faculty resources; emphasis on exhaustive analysis of literature in the subject area.

**CRJU 8193 Dissertation**
Requires consent of advisor. Students will work with advisory committee to complete dissertation.

**CRJU 8301 Portfolio Preparation**
The portfolio will consist of a comprehensive literature review on a topic of interest to the student which is to be selected in consultation with a graduate review committee. The portfolio will include a critique of the relevant literature, including any conflicts that exist in previous research, and direction for future research on the topic. The portfolio must be approved by the student’s graduate review committee. Students are expected to provide an oral presentation on the portfolio to the committee.

**CRJU 8302 Policy Portfolio Preparation**
This course will facilitate completion of the policy portfolio needed for graduation from the policy track of the MACJ program. Topics covered in this course include review of the literature, to include cases and laws; gathering policies, mandates, and legislation on the topic; research concerning policies of agencies, and qualitative / quantitative research methodologies. The product of the course will be a complete policy portfolio.

**CRJU 8303 Thesis**
Independent investigation demonstrating knowledge and methods of scholarship and culminating in a written thesis with oral defense. Variable credit of one to three hours.

**CRJU 8310 Doctoral Proseminar**
Provides a foundation for the study of crime and justice and an introduction to the role of Ph.D.s in criminology/criminal justice. Topics include current trends in higher education, employment and career planning, and the role of academics in reducing crime. The course will also serve as an introduction to the doctoral program and writing refresher for incoming doctoral students.

**CRJU 8311 Survey of Theories of Justice**
Addresses the theoretical foundation of the justice system in the U.S. Topics include theories related to policing, law, corrections, and juvenile justice. This course provides a foundation for the advanced studies of topics in other courses in the doctoral program.

**CRJU 8312 Secondary Data Set Management**  
Provides an understanding of secondary data sets and how they can be used in analyses and program evaluation. Topics include data cleaning for accuracy and efficiency, recording variables, and preparing data sets for analysis with SPSS.

**CRJU 8313 Advanced Criminological Theory**  
Current works in criminological theory. Addresses updates of classical criminological theories as well as theories and research within the previous ten years.

**CRJU 8314 Mixed Methodology**  
The course provides instruction in advanced methodologies of criminal justice and criminological research. Students will be exposed to a variety of qualitative techniques in addition to quantitative techniques of research methods. CRJU 7392 should be completed prior to taking this class. Enrollment in this course is restricted to students enrolled in the Ph.D. in Criminal Justice. Students from outside the CRJU Ph.D. program who wish to enroll must have permission of the Criminal Justice graduate coordinator and the professor of records.

**CRJU 8315 Multivariate Statistics**  
This course provides instruction in advanced multivariate statistical application. CRJU 7391 should be completed prior to taking this class.

**CRJU 8331 Urban Spatial Structures**  
Provides an understanding of American cities, how they have changed over time, and how the spacio-temporal characteristics influence criminal behavior.

**CRJU 8332 Theories of Neighborhoods and Crime**  
The goal of the course is to provide a comprehensive theoretical background upon which to conduct research on neighborhoods and crime.

**CRJU 8333, Theory and Practice of Spatial Analysis**  
Advanced analysis of data related to crime in the urban environment. Topics include using Spatial Analyst, CrimeStat III, and other spatial statistics. Theories of neighborhoods and crime will be tested using data on crime and social dynamics.

**CRJU 8373 Critical Issues in Criminology**  
This course is designed to provide in-depth readings on topical subjects that are pertinent to student’s concentration area. Students will be provided with a readings list and will be required to demonstrate analysis of information from that list in the form of papers, presentations, and special topic discussions.
CRJU 8383 Research Practicum
Course goals are to: 1) give students experience in writing grant proposals and obtain funding, 2) give students experience in designing research and putting research in practice, 3) give students practical experience in conducting research, and 4) build on student knowledge in analysis and research in preparation for completing their dissertation.

CRJU 8393 Dissertation
Requires consent of advisor. Students work with advisory committee to complete dissertation.

ECON – Economics

ECON 5350 Applied Econometrics
Prerequisites: ECON 7320 or equivalent. This course will introduce students to the skills used in empirical research, including, but not limited to, data collection, model specification, regression analysis, violations of regression assumptions and corrections, indicator variables, linear restrictions tests, and limited dependent variable models. The course will focus on the intuition and application of econometric methods, and statistical software will be used extensively. Students will be required to complete an independent research project involving the application of regression analysis.

ECON 7100 Foundations of Business
This course provides the foundations necessary for students planning to take more advanced MBA-level courses. This course covers two main topics. The first topic is the market, where we learn how to predict and explain behavior in the marketplace, explain the determination of prices, quantities, and allocation of resources, and calculate and explain elasticity measures. The second topic is the firm, where we learn how to explain and describe the economic costs and profit-maximizing decision-making for a firm.

ECON 7200 Applied Problem Solving
Prerequisite: Passing score on Excel assessment. This course teaches students the art of recognizing business problems and opportunities, understanding the decision process and the role that statistical tools play in analyzing, summarizing, and converting data into useful information for gaining insight and making sound business decisions. Emphasis is placed on using statistical tools and judgment to solve problems. This course prepares students with core knowledge that can be used for discipline-specific data analysis and decision making.

ECON 7300 Economic Principles
MBA Foundation Course. Theory of the individual firm in the economy; utility, demand theory, elasticity; cost and price determination, income distribution; macroeconomic analysis of income, employment, prices, business fluctuations, monetary system, elements of international trade.

ECON 7313 Economics and Global Business
Prerequisite: ECON 7100 or passing score on assessment. MBA Core Course or MS in MIS
Elective. The use of economic analysis in managerial decision making. Microeconomic topics include information asymmetries relating to agency and adverse selection, the firm’s horizontal and vertical structure, demand theory and estimation, market structure analysis, marginal analysis, game theory, and pricing policies. Macroeconomic topics include international trade and the effect of monetary and fiscal policies on the firm’s macroeconomic environment.

**ECON 7320 Quantitative Analysis**
MBA Foundation Course. Introductory calculus and statistics with applications in business, including topics such as differential and integral calculus, descriptive statistics, probability theory, hypothesis testing, and regression analysis.

**ECON 7322 Econometrics**
MBA or MS in MIS Elective. Prerequisite: ECON 7321 or consent of instructor. Application of statistics, mathematics to economic problems; economic models formulation, measurement, verification, prediction.

**ECON 7324 Environmental and Resource Economics for Managers**
MBA or MS in MIS Elective. Prerequisite: ECON 7300; permission of instructor to permit non-MBA graduate students to enroll. This course presents the theoretical and applied aspects of resource use and environmental issues that are faced by managers in modern business settings. Economic efficiency is defined and explored and employed throughout the course as a means of approaching resource and environmental problems. Case examples of pollution problems and resource misuse are introduced as a means of understanding economic efficiency.

**ECON 7330 Public Sector Economics**
MBA or MS in MIS Elective. Prerequisite: ECON 7300 or consent of instructor. Theory of public goods, allocation techniques; welfare economics, welfare politics concepts and critique; revenue sources, equity considerations and impact; public sector budgeting; theory, concepts of fiscal federalism.

**ECON 7399 Independent Study**
MBA or MS in MIS Elective. Prerequisites: All Foundation courses, 12 credits of Core requirements, and consent of instructor. Intensive research under faculty supervision on an approved topic in an area not covered in depth through regularly scheduled courses; research paper required.

**ECON 8200 Economic Principles**
Only open to Executive MBA students. Theory of the individual firm in the economy; utility, demand theory, elasticity, cost, and price determination, and strategic position of the firm in an industry.

**ECON 8210 Economic Strategy**
Only open to Executive MBA students. Prerequisite: ECON 8200. A systematic study of economic forces affecting the business firm and their impact on corporate strategy.
**ECON 8300 Seminar in Current Topics**  
MBA or MS in MIS Elective. Prerequisite: Consent of instructor. Topics of current importance and interest in economics.

**ECON 8320 Statistical Methods in Business**  
Only open to Executive MBA students. Statistical analysis with applications in business. Topics include descriptive statistics, probability, sampling theory, hypothesis testing, and regression analysis. Theoretical concepts are reinforced through the use of computer projects.

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**EDAS – Educational Administration and Supervision**

**EDAS 7300 Foundations of Educational Administration**  
Co-requisite: EDAS 7305 or 7307. This course will provide the student with an introduction to the organization and leadership theoretical knowledge base with practical application for school administrators.

**EDAS 7301 Administration and Assessment of Curricular Programs**  
Prerequisite: EDAS 7300, 7302, 7303, 7305, 7304. An introduction to the concepts involved in the planning, organization, administration, and evaluation of curricular programs that are aligned with instructional and assessment techniques.

**EDAS 7302 School Finance and Human Resource Allocation**  
A study of school finance concepts and the allocation of human resources within the education system.

**EDAS 7303 Education Law and Ethics**  
Prerequisite: EDAS 7300; 7304; 7305. A study of legal concepts, issues relating to public school administration.

**EDAS 7304 Supervision of Learning Services**  
Prerequisite: EDAS 7300 and 7305. This course will provide the student with acquisition of knowledge and skills relevant to administrative supervision and evaluation, with opportunities for application to practice in supervising learning services.

**EDAS 7305 The Principalship**  
Co-requisite: EDAS 7300. This course will provide the student with the acquisition of knowledge and application of practice for administration of elementary schools including pre-K through early childhood grades.

**EDAS 7309 Building Coalitions in School and Community**  
Prerequisites: EDAS 7300 Foundations of Educational Administration and EDAS 7305 or 7307 Elementary or Secondary Principalship. This course will provide the student with the knowledge and dispositions needed to facilitate and engage in collaborating with families and community
members, respond to diverse community interests and needs, and mobilize community resources that promote the success of all children.

**EDAS 7310 Facilitating School Improvement**
Prerequisites: EDAS 7300 Foundations of Educational Administration and EDAS 7305 The Principalship. This course provides the student with the acquisition of knowledge and application of practice for analyzing, initiating, managing, and evaluating the process related to organizational change for school improvement.

**EDAS 7343 Workshop**
Prerequisites: EDAS 7300. (For prospective, practicing, administrators, supervisors). Experiences; development of special skills.

**EDAS 7380 Administrative Internship**
Prerequisites: EDAS 7300, 7302, 7303, 7304, 7305. This course will provide the student with significant opportunity to synthesize and apply knowledge, and develop and practice administrative skills in diverse settings under the direction of a school and/or school district administrative mentor and the university.

**EDAS 7391 Independent Study in Educational Administration**
Specific topic of student’s interest in educational administration.
EDAS 8300 Educational Specialist Seminar and Scholarly Writing
Education specialist concentration in preparation for advanced graduate studies with a focus on scholarly writing.

**EDAS 8301 Group Dynamics and Behavior in Learning Organizations**
Prerequisite: EDAS 7300. This course will provide the student with an introduction to theoretical knowledge and an understanding of implications related to group dynamics and behavior specific to team building and group collaboration for leaders in educational organizations.

**EDAS 8303 Advanced Seminar in School Law and Ethics**
Prerequisites: EDAS 7300 and 7303. The advanced study of legal and ethical concepts and issues related to executive management of educational institutions.

**EDAS 8305 School Personnel Administration**
Techniques, practices of administering school personnel programs.

**EDAS 8307 Socio-Cultural Foundations of Educational Policies**
Education as a socio-cultural phenomenon; fundamental differences in views of educational aims and values in a historical context.

**EDAS 8308 Central Office and Special Programs Administration**
Prerequisite: EDAS 7300. Board-administration relationships, organizational theory and practice, unique requirements of administering special programs in school districts, special schools, service
centers; includes special, multicultural, gifted and talented education.

**EDAS 8310 Directed Readings in Educational Administration**
Prerequisite: consent of advisor. Current writings; evaluation of research base, assessment of authors’ hypotheses; knowledge of current research, theory.

**EDAS 8311 The Superintendency**
This course addresses the theory and practice of such areas as superintendent-board relation, strategic planning, professional negotiation, leadership style, and school climate from the superintendent’s perspective.

**EDAS 8312 School Business Management/Facilities Planning**
This course will provide the student with acquisition of knowledge and application of practice of school personnel administration.

**EDAS 8313 School and Community Relations**
The course presents principles and practices in developing and maintaining appropriate school/community relationships, opinion analysis communication processes, and decision making patterns.

**EDAS 8314 Contemporary Issues and Trends in Educational Administration**
The course will provide the student with the opportunity to investigate contemporary issues and trends related to educational administration and examine problems and solutions that are of current concern for school organizations.

**EDAS 8315 Administrative Problem Analysis**
A practical examination of the skills and knowledge needed to do problem analysis (problem finding, problem solving, problem sharing, participatory decision making, and leadership sharing) for school problem situations.

**EDAS 8316 Collective Negotiations**
The history of the public school labor movement in the United States and in the state of Arkansas, and the role of the educational Administrators in the negotiations and contract administration process.

**EDAS 8317 Politics and Policy Analysis**
Theory, practice of policy making; political influences brought to bear on policy issues in education.

**EDAS 8320 Advanced Administrative Leadership Theory**
An in-depth examination of theoretical concepts underpinning educational administration and the relationships of theories to current research and practice.

**EDAS 8330 Organizational Systems Analysis, Design, and Change**
An in-depth examination of theoretical concepts related to educational organizational structures and the study of conceptual models used for organizational analysis, design and organizational change in education.

**EDAS 8380 Administrative Internship in the Central Office**
Prerequisites: 24 graduate hours in educational administration. This course will provide the student with significant opportunity to synthesize and apply knowledge, and develop and practice administrative skills in diverse setting under the direction of a district/central office administrative mentor and the university.

**EDAS 8381 Administrative Internship in the Central Office**
Prerequisites: 24 graduate hours in educational administration and completion of EDAS 8380 Administrative Internship in the Central Office. This course will provide the student with significant opportunity to synthesize and apply knowledge, and develop and practice administrative skills in diverse setting under the direction of a district/central office administrative mentor and the university.

**EDAS 9300 Doctoral Seminar and Scholarly Writing**
Prerequisite: program admission. Orientation to doctoral studies, program procedures, dissertation issues, reflecting the expectations of the course standards consistent with the requirements of the Arkansas Department of Education, the Interstate School Leaders Licensure Consortium, and the National Council for the Accreditation of Teacher Education.

**EDAS 9199-9999 Dissertation**
Prerequisites: completion of all course work, consent of instructor. Development of a doctoral-level dissertation.

**EDAS 9390 Dissertation Colloquium**
Development of various components of doctoral-level dissertation proposal.

**EDFN – Educational Foundations**

**EDFN 7142, 7242, 7342 Seminar**
Topics related to educational foundations concepts. Offered on demand.

**EDFN 7143, 7243, 7343 Workshop**
Hands-on experiences related to education; topics vary. Offered on demand.

**EDFN 7302 Introduction to Program Evaluation**
Covers select models of summative and formative evaluation with a focus on social science methods of inquiry for the purpose of evaluating programs in education, government and nonprofit agencies, the health professions, and the military. Topics include organizational goals, models of program evaluation, accountability evidence, research methods and techniques, data-
driven decisions, justifying conclusions, and report writing with clarity. Students will design a program evaluation that attends to diversity, sensitivity, and has value to a broad range of stakeholders.

**EDFN 7303 Introduction to Educational Research**
Prerequisite: graduate standing. Introduction to applied research in education across the major quantitative, qualitative, and action research traditions. Focus is on understanding the research process and its integrated components and evaluating published research reports from the perspective of a critical consumer. Topics include scientific reasoning, types of variables and hypotheses; sampling; data collection and instrumentation; control procedures; common experimental, non-experimental, qualitative, and mixed methods research designs; data analysis; and research critiques and proposals.

**EDFN 7304 Basic Statistics**
Introduction to descriptive and inferential statistics used in education and data-driven decision making. Topics include commonly used descriptive statistics, exploratory data analysis, standardized scores, inferential reasoning, hypothesis testing, and parametric and nonparametric procedures and their assumptions including t-tests, one-way analysis of variance, correlation coefficients, bivariate regression, and chi-square. Emphasis is on understanding the logical bases of statistical tests of significance, selecting appropriate data analysis techniques, and using statistical software and interpreting its output.

**EDFN 7305 Introduction to Program Evaluation**
Covers select models of summative and formative evaluation with a focus on social science methods of inquiry for the purpose of evaluating programs in education, government and non-profit agencies, the health professions, and the military. Topics include organizational goals, models of program evaluation, accountability evidence, research methods and techniques, data-driven decisions, justifying conclusions, and report writing with clarity. Students will design a program evaluation that attends to diversity, sensitivity, and has value to a broad range of stakeholders.

**EDFN 7307 History and Philosophy of Education**
Historical, philosophical factors and trends; their effect on American education.

**EDFN 7308 Multicultural Education Trends and Issues**
Multicultural education movement in the U.S., selected western industrial nations; includes historical development, goals, implementation.

**EDFN 7313 Learning Theories and Instructional Applications**
Major theories of human learning and psychological principles of learning for instruction, including systematic instructional design and models of effective instruction; contemporary issues with implications for practice.

**EDFN 7314 Cognition and Instruction**
Prerequisite: EDFN 7313. Exploration of recent developments in cognition and the implications for instructional practices resulting from theory and research in cognitive psychology.

**EDFN 7320 Advanced Educational Psychology**
Prerequisite: EDFN 7313. This course addresses a variety of contemporary issues that affect academic performance. Topics are organized around the traditional categories of learning, identity development, motivation, discipline, and assessment. Students study different theoretical approaches to articulate and ultimately defend a personal theory of learning and teaching.

**EDFN 7330 Human Development**
Prerequisite: graduate standing. A lifespan perspective that addresses cognitive, physical, social and emotional development from birth through late adulthood. Special emphasis on developmental factors that effect schooling (P-12).

**EDFN 7370 Educational Assessment**
Assessment, evaluation; role of measurement in education and human service agencies; psychometric properties of norm-referenced and criterion-referenced tests; construction of test items with specialized considerations for atypical populations such as young children, culturally different, and those with exceptionalities; use and interpretation of standardized tests in educational settings.

**EDFN 7373 Qualitative Research Methods**
Prerequisite: EDFN 7303. This course has primarily a twofold purpose: to expose students to the knowledge base, tradition, and theory of qualitative research. While introductory in nature, this course allows students to explore theoretical underpinnings as well as consider methodological strategies in preparation for designing a research project and writing it up for presentation.

**EDFN 8301 Instructional Research and Data Management**
Prerequisite: EDFN 7303. Application of research methods and data analysis techniques to the study of instruction and reflective practice. Topics include models of quantitative, qualitative, and mixed methods research; the application of research designs in the classroom; control procedures; evaluation research; and data analysis including statistical software and approaches to analyzing qualitative data. Note: This is a project-based course and requires a research proposal or completed action research.

**EDFN 8305 Intermediate Statistics**
Prerequisite: EDFN 7304. A second course in statistics that covers the more complex analyses used in education and data-driven decision making. Topics include simple and multiple linear regression, one- and two-factor fixed factor analysis of variance, random and mixed model analysis of variance, randomized block, hierarchical analysis of variance, and analysis of covariance. Emphasis is on further understanding the logical bases of statistical tests of significance, selecting appropriate data analysis techniques, and using statistical software and interpreting its output.
EDFN 8306 Advanced Educational Research  
Prerequisites: EDFN 7303, EDFN 7304. A second course in quantitative, qualitative and mixed methods research designs commonly used in education. Topics include the philosophy of science, research problems, control procedures, sampling designs, measurement procedures, data collection strategies, and approaches to data analysis. Focus is on complex designs across the research traditions, writing critical reviews, and writing research proposals that include sound methodology.

EDFN 8308 Advanced Statistics  
Prerequisites: EDFN 8305. An advanced course in statistics that covers complex analyses used in education and data-driven decision making. Topics include multivariate analysis of variance, loglinear analysis, discriminate function, canonical correlation, and an introduction to structural equation modeling and confirmatory factor analysis. Emphasis is placed on providing solid skill in the use of the major statistical software packages for the purposes of program evaluation or other advanced analysis requirements.

EDFN 8310 Applied Measurement in Research and Analysis  
Prerequisite: EDFN 8305 and 8306. Theoretical bases of measurement in education, applied measurement techniques, and practical approaches to the design and analysis of data collection instruments. Topics include psychometrics, scale construction, and instrument design and development.

EDFN 8383 Advanced Qualitative Research Methods  
Prerequisite: EDFN 7373. A second course that is designed to provide students with an in-depth exploration into the philosophy, theory and practice of naturalistic inquiry. Students will explore the philosophical foundation of post modern research. Furthermore, students will study a variety of qualitative research design, data collection, data analysis, and report writing methods. Students will conduct a research study and receive feedback on the study’s design specific to a single tradition of qualitative inquiry, on data collection, on data analysis, and on drafting the narrative.

ENGL – English

ENGL 5116, 5216, 5316 Seminar in Creative Writing  
Prerequisites: ENGL 3398, 3399, or consent of instructor. Study and practice in creative writing. Class discussion/studio workshop/field placement. May be repeated when the topic varies. Offered in summer.

ENGL 5202 Teaching Literature in Secondary Schools  
A methods course which is team taught by the English and rhetoric and writing departments. The topics will include making classroom presentations, managing small group work, responding to student writing, evaluation, and using secondary school literature and composition textbooks, approaches to teaching literature, and writing as a way to reading. It should be taken in
conjunction with RHET 5202.

**ENGL 5315 World Englishes**
A study of national, regional, and social varieties of English with special attention to the political, cultural, and economic issues facing the use of English as a world language or lingua franca. Recommended prerequisite: ENGL 3311 or ENGL 3313. Dual-listed in the UALR Graduate Catalog as ENGL 5315. Three credit hours.

**ENGL 5317 Literary Linguistics**
An application of recent theories and methodologies of linguistics and language arts to the reading, analysis, and appreciation of literature. Recommended prerequisite: ENGL 3311 or ENGL 3313. Dual-listed in the UALR Graduate Catalog as ENGL 5317. Three credit hours.

**ENGL 5324 Shakespeare**
Selected works, including the major comedies and tragedies. Three credit hours.

**ENGL 5325 Teaching Shakespeare**
Prerequisites: graduate standing, undergraduate major or minor in English or equivalent consent of instructor. Pedagogical focus on teaching Shakespeare’s plays in the elementary and secondary schools by using performance activities. Special emphasis on the four Shakespearean plays most often taught (Romeo and Juliet, Julius Caesar, Macbeth, Hamlet); one comedy and one history play will be included by titles, may change each time course is offered.

**ENGL 5328 Seventeenth-Century Literature**
English poetry and prose from 1600 to 1660, with emphasis on Donne and Milton. ENGL 5332 Mid and Late Eighteenth-Century Literature Later Pope, the novel, Johnson. Three credit hours.

**ENGL 5341 Romantic Poetry**
Representative works of Blake, Coleridge, Wordsworth, Byron, Keats, and Shelley. Three credit hours.

**ENGL 5343 Victorian Literature**
Prerequisites: graduate standing. Representative writers, including Tennyson, Browning, Arnold, and Hopkins. Three credit hours.

**ENGL 5355 Readings in European Fiction**
Prerequisite: graduate status. This course will focus on representative readings in European fiction from the eighteenth century to the present (in translation).

**ENGL 5364 Modern Poetry**
Representative readings in modern English and American poetry including works by Hopkins, Yeats, Frost, Sandburg, and Eliot. Three credit hours.

**ENGL 5365 Modern Novel**
Reading of American and British novels of the Modernist Period. Three credit hours.

**ENGL 5367 Short Story Survey**
Wide reading of American and foreign short fiction. Three credit hours.

**ENGL 5369 The Form and Theory of Poetry**
Survey of the form, techniques, and theories of poetry, emphasizing the views of poets. Three credit hours.

**ENGL 5370 Seminar in Language or Literature**
Prerequisites: graduate standing, consent of instructor. Selected topics in language or literature. May be repeated when the topic differs. Offered in fall. Three credit hours.

**ENGL 5381 American Fiction**
Representative readings in the development of American literature. Three credit hours.

**ENGL 5398 Fiction Writing II**
Prerequisites: ENGL 2336, 3319, or consent of the instructor. Continued study and practice in the writing of fiction. Class discussion/workshop and individual conferences. Three credit hours.

**ENGL 5399 Poetry Writing II**
Prerequisites: ENGL 2336, 3319, or consent of the instructor. Continued study and practice in the writing of poetry. Class discussion/workshop and individual conferences. Three credit hours.

**ENGL 7100, 7200 Independent Study**
Students will work with an instructor on a project designed to apply critical thinking skills to specialized knowledge in one of the areas of English literature or linguistics. Students may work on evaluating primary and secondary sources, exploring one or more critical methodologies, and/or constructing research plans for further work. Limited to a total of three credit hours. Prerequisites: graduate standing, a current secondary teaching job, or secondary certification in English or a related area. For graduate students and working teachers, each of these courses focuses on one or more literary works or areas commonly taught in secondary schools. Each course covers particular texts, current interpretations and approaches, useful teaching methods, resources currently available (videos, CD-ROMs, etc.) and classroom assignments and activities.

**ENGL 7312 Linguistic Theory**
Prerequisite: graduate standing (assumes knowledge of traditional grammar). Examination of English grammar in current objective, scientific terms; focus on how English sentences are structured.

**ENGL 7320 Seminar in Linguistics**
Prerequisites: graduate standing, background in formal language analysis related to the seminar topic or consent of instructor. Advanced topics in linguistic analysis including syntax, semantics, phonology, morphology, historical linguistics, dialectology, sociolinguistics, language acquisition;
work with primary sources in the area of study. May be repeated for credit when the topic varies. Offered on demand.

**ENGL 7360 Seminar in Literature**
Prerequisites: graduate standing; undergraduate English minor or equivalent or consent of instructor. Major author in either British or American literature; author may change each time course is offered.

**ENGL 7369 Seminar in Analysis of Literary Form**
Prerequisites: graduate standing; undergraduate English minor or equivalent or consent of instructor. Selected literary texts representing a variety of eras, modes; substantial body of criticism of those texts reflecting a variety of methods, theories.
ENGL 7150, 7250, 7350 New Perspectives in Teaching Literature

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**ENHS – Environmental Health Sciences**

The Department of Environmental Health Science has no graduate programs; however, many of the department’s courses are used in other programs.

**ENHS 5199, 5299, 5399 Special Topics in Environmental Health Sciences**
Prerequisite: graduate standing or consent of instructor. Topics include specialized areas of environmental health sciences. Credit varies depending on depth of content. One to three hours lecture per week. Offered on demand.

**ENHS 5410 Environmental Planning**
Prerequisites: ENHS 2320, or consent of instructor. The planning process and evaluation methods applicable to various environmental programs are addressed. Resource allocation and procurement topics are included as appropriate to environmental planning. Case studies are presented which include areas such as watershed planning, land use, solid and hazardous wastes, air quality, and energy. Group discussions, role playing exercises, computer exercises and field study tasks will supplement class lectures.

**ENHS 5415 Environmental Impact Analysis**
Prerequisites: ENHS 3310, ENHS 3340 or 3350, RHET 3316, BIOL 3303 and 3103, STAT 4350, or consent of the instructor. This course provides individuals with knowledge and skills necessary to prepare and review environmental assessments (EAs) and environmental impact statements (EISs). The National Environmental Policy Act (NEPA) and its key components are presented for discussion. Case studies and group discussions are used to supplement class lectures. Field and laboratory exercises appropriate to the environmental impact analysis (EIA) process will be presented and used to prepare an EA for a selected site.

**ENHS 5430 Environmental Epidemiology**
ENHS 3340 or 3350, BIOL 2401, STAT 4350, or consent of the instructor. The principles of
environmental epidemiology are introduced with specific emphasis on its application to various environmental settings. Statistical methods used for analyzing environmental epidemiological data are introduced. Computer applications will be presented in lecture and laboratory sessions. The role of environmental epidemiology in anti-bioterrorism programs will be presented. Lectures will be supplemented with laboratory computer exercises, site visits, and field studies.

ERSC – Earth Science

ERSC 5100, 5200, 5300 Independent Problems
Prerequisite: consent of the instructor. This course offers the student an independent laboratory or field study of a problem in the earth sciences in consultation with an instructor. Credit varies per problem topic.

ERSC 5199, 5299, 5399, 5499 Special Topics
Prerequisite: consent of the instructor. This course offers study in advanced and specialized topics in the geological sciences especially those of current interest. Refer to the semester’s schedule for the special topics offered. Credit will vary depending upon the course topic.

ERSC 5322 Environmental Geology
Prerequisite: ERSC 1302/1102 and MATH 1302 or consent of instructor. Humans as a geologic agents, geologic hazards in the environment, geology and land use studies, urban geology, and case histories. Dual-listed as ERSC 4322. Three hours lecture per week. Three credit hours.

ERSC 5323 Geology of Arkansas
Prerequisites: ERSC 1302/1102 or 1303/1103 or consent of instructor. Regional geomorphology, structure, stratigraphy, and paleontology of Arkansas. Includes field trips to Ozark dome, Ouachita fold belt, Arkansas Valley, and Mississippi Embayment/Gulf Coastal Plain. Dual-listed as ERSC 4323. Three hours lecture per week, field trips. Three credit hours.

ERSC 5371 Engineering Geology
The study of the interaction of rock, soil, and geologic processes with the engineering activities of man by applying geological data, techniques and principles. The integration of geological, geotechnical and geophysical investigative methods will be emphasized. Lecture topics will include soil and rock mechanics and rock deformation, the assessment of the spatial-temporal variability of sub surface material, slop stability analysis and slope failure mitigation, earthquake engineering, hydrologic systems management, and the application of GIS and geology. Two hours lecture, two hours laboratory per week. Three credit hours.

ERSC 5373 Hydrogeology
Prerequisites: MATH 1302 or 1311; ERSC 3310; Co-requisite CHEM 1402 Ground water occurrence, flow, porosity, permeability, aquifer analysis, geology of ground water, water well logging, well development, case histories, field methods, hydrogeologic planning. Three hours lecture per week. Offered in spring on even years.
ERSC 5391 Cooperative Education in Earth Science
Prerequisites: Consent and approval of assignment by advisor. Supervised professional experience related to students discipline with governmental agencies, industry and consulting firms. This course requires a minimum of 200 semester work hours. Dual listed as ERSC 4391. Three credit hours.

ERSC 5419 Geomorphology
Prerequisites: ERSC 1302, ERSC 1102, ERSC 3320, or consent of instructor. The study of form and process at the Earth’s surface. The interactions between erosional and depositional processes at the Earth’s surface with tectonic processes operating within the Earth are examined with respect to landform evolution. Laboratory includes the analysis of maps, digital imagery, and field applications of GPS/GIS technology. Dual-listed as ERSC 4419. Three hours lecture, two hours laboratory or field study per week. Four credit hours.

ERSC 5421 Introduction to Geographic Information Systems
Prerequisites: consent of instructor. This course introduces Geographic Information Systems (GIS) and the use of spatial data for problem-solving in science. The lecture portion of the course focuses on the data models used to represent spatial features and on the processes involved in creating, acquiring, analyzing, and displaying georeferenced information. The laboratory portion of this course employs a project-based methodology including applications from geology, biology, environmental science, and political science to foster basic GIS software proficiency. Three hours lecture, two hours laboratory per week. Four credit hours.

ERSC 5422 Applied GIS (Geographic Information Systems)
Prerequisites: BIOL/ERSC 4421/5421 or consent of instructor. This course builds on the fundamental concepts of Geographic Information Systems (GIS) from Introduction to GIS. It focuses on advanced applications in GIS with an emphasis on problem-solving, advanced analysis techniques, and database management. Two lecture hours per week, four laboratory hours. Four credit hours.

ERSC 5426 Introduction to Remote Sensing
Prerequisites: ERSC/BIOL 4421/5421 or consent of instructor. This course introduces the fundamentals of manipulating and interpreting the electromagnetic spectrum. The lecture portion of the class covers concepts of remote sensing, including how data is collected, processed, analyzed, and interpreted. The lab portion of the class is focused on building proficiency in several images processing software programs and the use of spatial data for problem-solving in science. Dual listed as ERSC 4426. Three hours lecture, two hours laboratory or field study per week. Four credit hours.

ERSC 5473 Hydrogeology
Prerequisites: ERSC 1302/1102 or ERSC 1303/1103 and MATH 1302 or higher. Ground water occurrence, flow, porosity, permeability, aquifer analysis, geology of ground water, water well logging, water chemistry, water quality, well development, case histories, field methods, hydrogeologic planning. Dual-listed as ERSC 4473. Three hours lecture and two hours lab per
week. Four credit hours.

ERSC 7399 Selected Topics

ERSC 7399 Selected Topics
Prerequisites: four undergraduate geology hours, professional experience in some area of earth science, consent of instructor. Topics include modern geology, meteorology, oceanography; assists professionals to remain current in these rapidly expanding fields; laboratory emphasis on creative problem solving, field trips. Two hours lecture, three hours laboratory per week. Offered in summer.

FINC – Finance

FINC 5320 Bank Financial Management
MBA Elective. Prerequisite: FINC 7100. Analysis and management of the asset and liability portfolio of depository financial institutions. Not open to students with credit for FINC 4320.

FINC 5383 Applied Equity Analysis
MBA Elective. Prerequisite: FINC 3350 for undergraduate or FINC 7320 for graduate credit, and consent of instructor. Using modern models of equity valuation, students analyze company and industry data, estimate fair value for equities, and then present their recommendations to a panel of industry experts. Once approved, the students’ equity selections will then be implemented in the Ford Investment Trust. Students must apply to enroll in the course; check with the Department for application forms and deadlines. Enrollment is limited to 15 students, no more than 5 of whom may be graduate students.

FINC 7100 Finance Fundamentals
Prerequisite: ACCT 7100, passing score on Excel assessment. This course provides students with the essential skills required to successfully complete the FINC 7311 course. The course will cover financial statement and cashflow analysis, time value of money and its applications to both financial and real assets, and risk and rates of return.

FINC 7301 Financial Management
MBA Foundation Course. Prerequisites: ACCT 7302, ECON 7300, and ECON 7320 or equivalent. Financial resources management; emphasis on financial statement analysis, time value of money, valuation of financial assets, capital budgeting, cost of capital, capital asset pricing, capital structure and dividend policy.

FINC 7311 Applied Corporate Finance
Prerequisite: ACCT 7304, ECON 7313, or Concurrent MGMT 7280 FINC 7100 or Passing Score on finance assessment. This course fully develops the analysis of financial statements and cash flow and then examines the investment and financing decisions are discussed in the context of information asymmetry, potential agency problems, and corporate governance. The course stresses the application of finance theory to real life business situations through the use of case
FINC 7320 Advanced Investment Analysis
MBA or MS in MIS Elective. Prerequisite: FINC 7301 or equivalent. Evaluation of capital markets, analytical techniques useful for security analysis; emphasis on analysis of stocks, bonds in portfolio management.

FINC 7323 Bank Financial Management
Prerequisite: FINC 7301 or equivalent. Analysis and management of the asset and liability portfolio of depository financial institutions.

FINC 7325 Financing Entrepreneurial Ventures
MBA or MS in MIS Elective. Prerequisite: FINC 7100. Explores financing alternatives and concepts as they relate to new and growing ventures. Among the financing alternatives discussed are debt financing from banks, SBIC’s and other asset based lenders, and equity financing from angel investors, private placements, venture capitalists, and private equity markets. Students are required to analyze financing needs and use firm valuation methods.

FINC 7330 Insurance and Risk Management
MBA or MS in MIS Elective. Prerequisite: FINC 7100 or equivalent. Nature of risk; risk management concept; relationship of risk management to business functions; insurance’s nature, role as a risk management technique in business, personal affairs; includes property, liability, personal insurance lines.

FINC 7335 International Finance
MBA Elective. Prerequisite: FINC 7301 or equivalent. Multinational corporate finance; practices and problems in international finance; balance of payments and foreign exchange problems; recent trends and developments in international finance.

FINC 7340 Real Estate Markets
MBA or MS in MIS Elective. Real estate analysis; includes real estate typology, elements of real property law, basic contractual arrangements in real estate business, sources of financing, market-comparison valuation, government policies affecting real estate and local zoning, real estate taxation practices. (For business-oriented students with no real estate background).

FINC 7350 Financial Institutions and Organizations
MBA or MS in MIS Elective. Prerequisite: FINC 7100 or equivalent. Functions of financial intermediaries; assets, liabilities management analysis; historical highlights, future growth prospects; problems, solutions.

FINC 7399 Independent Study
MBA or MS in MIS Elective. Prerequisites: All Foundation courses, 12 credits of Core courses, and consent of instructor. Intensive research under faculty supervision on approved topic in an area not covered in depth through regularly scheduled courses; research paper required.
FINC 8300 Seminar in Current Topics
MBA or MS in MIS Elective. Prerequisite: Consent of instructor. Topics of current importance and interest in finance.

FINC 8310 Financial Management
Only open to Executive MBA students. Prerequisites: ACCT 8400, ECON 8200 and ECON 8320. The application of financial management concepts to a firm. Topics include financial statement analysis, time value of money, valuation of stocks and bonds, capital asset pricing, capital budgeting, cost of capital, dividend policy, capital structure, and other special topics.

FINC 8311 Financial Planning
Only open to Executive MBA students. Prerequisites: FINC 8310. Examines the two major decisions of financial managers - the investment decision and the financial decision - from the perspective of value creation. Further develops the financial theory presented in the introductory course with applications to specific cases. Topics include financial forecasting, cost of capital, capital structure, capital budgeting, long-term financing, business valuation and the market for corporate control.

GEOG – Geography

Courses in Geography

GEOG 5300 Special Topics
Prerequisites: nine geography hours (or nine hours in an associated discipline that complements the topic), consent of instructor. Topics of contemporary interest and demand; focused to permit in-depth understanding of issue.

GEOG 5321 Geomorphology
Prerequisite: consent of the instructor. See ERSC 5321.

GEOG 5332 Population Geography
Global, national, and sub-national population process, issues, and policies. Emphasis on basic demographic components of fertility, mortality, and migration; on population structures; factors that influence the demographic components and the population structures over time.

GERO – Gerontology

GERO 5315 Interdisciplinary Health Care of the Elderly
Designed to increase clinical knowledge, skills, and attitudes of students in the health professions and other fields related to health promotion and maintenance for the elderly. In-depth exploration of the multiple factors associated with the physiological process of aging, psychosocial developmental tasks, and typical environments of aged persons. Dual-listed in the UALR Undergraduate Catalog as GERO 4315. Three credit hours.
**GERO 5346 Family in Late Life**
Prerequisite: GERO 2300. Family life of the elderly, including late-life marital relationships; widowhood and living alone; relations with children, grandchildren, siblings, and other kin; alternative and innovative lifestyles; family neglect and abuse of the elderly; and demographic and structural changes in the family and society that affect these matters. Exploration of dynamic and therapeutic models of family problems and process to provide a foundation of concepts for later training in counseling families with elderly members. The family as a natural support system for the elderly, along with the potential and limitations of such a system in a context of community support networks, will be core concepts. Dual-listed in the UALR Undergraduate Catalog as GERO 4346. Three credit hours.

**GERO 5385 Topics Seminar**
Prerequisite: consent of instructor. Special topics of critical and current interest to those interested and involved in the aging field. Topics range from Social Security, legislation affecting the elderly, and targeted programs to clinical and research developments in aging and life-span developmental issues. May be taken more than once under different topics. Dual-listed in the UALR Undergraduate Catalog as GERO 4385. Three credit hours.

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**HHPS – Health, Human Performance and Sport Management**

**HHPS 5340 Adapted Physical Education K-12**
This course presents the philosophy and methods pertaining to the adaptation of physical education for handicapped and exceptional students. A basic knowledge of handicapped conditions and the complications thereof for participating in physical education along with classroom, laboratory and practical experience will be provided to increase the awareness of the handicapped and to facilitate the application of knowledge to real life situations. Three hours of lecture per week.

**HHPS 5350 Methods and Techniques of Teaching Physical Education 6-12**
Prerequisites: HHPS 3320, HHPS 3210, and HHPS 3310, or department approval. This course provides a detailed review of the analysis and application of the major responsibilities and competencies required for teaching physical education 6-12. Emphasis is on learning the State Standards for Physical Education, Wellness, & Leisure (SSPEWL) K-12 licensure requirements and preparation for the ETS PRAXIS Series exams. This is the designated capstone course for the BS in Health Human Performance and Sport Management: emphasis in Health and Exercise Science, Minor in Secondary Education. Dual-listed in the UALR Undergraduate Catalog as HSCI 4350. Three hours lecture per week. Three credits hours.

**HHPS 5371 Health Education Concepts and Applications**
Concepts, philosophy, applications in public, private, professional, commercial organizations that exist to improve, maintain health. Three hours lecture per week. Offered in fall on even years.

**HHPS 5373 Controversial Issues in Health Education**
Health issues as influenced by laws, public opinion, scientific knowledge; current controversial issues in health education. (Also offered each summer in conjunction with Mid-South Summer School on Drug and Alcohol Abuse, usually last full week in June.) Three hours lecture per week. Offered on demand.

**HHPS 5378 Organization and Administration of Health Education Programs**
Prerequisites: HHPS 2303 and HHPS 4380 or department approval. This course is designed to provide a foundation in the organization and management of community-based health education programs. The purpose of this course is to provide an introduction to the fundamental concepts of management, administration and leadership; as well as, demonstrate their application in a variety of health education, health promotion and wellness programs. Dual listed in the UALR Undergraduate Catalog as HHPS 4378. This course is not open to students with credit for HHPS 4378. Three hours lecture per week. Three credits hours.

**HHPS 5399 HHPS Special Topics**
Prerequisite: HHPS 2330. Selected topics in specialized areas of health education, human performance, and sport management. Course topics will be announced in advance. Three credit hour lecture course.

**HHPS 5430 Epidemiology: Environmental & Health**
The principles of health and environmental epidemiology are introduced with specific emphasis on its application to various health and environmental settings. Statistical methods used for analyzing health and environmental epidemiological data are introduced. Computer applications will be presented in lecture and laboratory sessions. The role of health and environmental epidemiology in anti-terrorism programs will be presented. Lectures will be supplemented with laboratory computer exercises, site visits, and field studies.

**HHPS 7301 Research Methods in Health Sciences**
This course provides an overview examination of research methods applicable to the study of individual and group behavior. The course will interface behavioral theory, research design and methods, and data analysis/interpretation. The course will serve as an introduction and practical guide to conducting and critically evaluating health sciences and health behavior research.

**HHPS 7302 Basic Statistics in Heath Sciences**
A study of fundamental statistical concepts and techniques including descriptive and inferential parametric/non-parametric tests.

**HHPS 7303 Evaluation of Health Programs**
This course is an introductory course in evaluation designed for practitioners. The course content includes rationales for evaluation; political, organizational, theoretical, and educational aspects of evaluation; and methods to implement a sound evaluation.

**HHPS 7310 Theoretical Foundations of Health Education**
This course explores the role of theory in shaping research and practice in health promotion and
education, as well as historical and ongoing interaction between health education and the applied social sciences.

**HHPS 7311 Concepts and Methods of Health Education**
Fundamental principles and practices of public health promotion including history, ethics, cultural competence, professional responsibilities, overview of theory and models, and selection and implementation of instructional methods.

**HHPS 7313 Advanced Statistics for Health Science**
This course will introduce students to applied multivariable, multivariate, and data modeling analyses approaches used in health sciences research. Successful completion of HHPS 7302 (or equivalent) and permission of instructor required for enrollment.

**HHPS 7314 Health Education Curriculum Development**
The major focus of this course is on curriculum development and program planning in health promotion and education on a micro level. Practical aspects of curriculum development and program planning are emphasized. Learning theory and learning styles are discussed as they relate to health education curricula and program planning.

**HHPS 7320 Curriculum Development in Physical Education**
This course focuses on the content and process of PK-12 Physical Education curriculum development for the public schools.

**HHPS 7321 Advanced Motor Learning**
This course focuses on the advanced study of principles/theories of human motor learning, behavior and performance.

**HHPS 7322 Administration of Physical Education and Sport**
This course covers basic managerial theories and practices required to administer physical education and health programs in elementary, secondary schools and athletic settings.

**HHPS 7323 Biomechanics**
This course is designed to provide an advanced study of biomechanical concepts and their application to human movement and sport skills.

**HHPS 7324 Advanced Exercise Physiology**
This course applies physiological principles to exercise circumstance and includes critical analysis of the effect of exercise on human physiologic function with in-depth examination of current literature.

**HHPS 7325 Sports and Exercise Nutrition**
Prerequisite: Consent of the instructor. The Sports and Exercise Nutrition course is a study of the scientific basis of nutrition and diet on physical performance and health. Topics include energy metabolism, substrate utilization, and measurement of energy expenditure, thermoregulation,
fluid balance, rehydration, weight control, eating disorders, ergogenic aids, meal planning and evaluation.

**HHPS 7326 Lab Techniques in Exercise Science**
This course focuses on collecting and analyzing human data using various measurement devices often utilized in exercise science settings. The primary focus is to teach students how to work with human subjects in a research setting with various measurement devices. Furthermore, this course will also review research methodologies specific to certain types of data collections.

**HHPS 7327 Neuromechanics**
This course focuses on neurophysiology and motor control of human movements, specifically focusing on the central and peripheral control systems and their interaction. This course also addresses how injuries of the head and spine and neuromuscular diseases (e.g., MS, CP, Parkinson’s) affect human movement.

**HHPS 7330 Management and Leadership in Sport Organizations**
This course emphasizes the management and leadership components of sport organizations. Specifically, the course will focus on the means of improving performance and satisfaction within sport organizations. Several areas will be discussed such as developing goals, decision making, strategic planning, leadership styles, and human resource management with the objective of developing a management and leadership philosophy.

**HHPS 7331 Sport Law**
This course is a study of legal issues affecting the delivery of sport services; focuses on liability in sport activities.

**HHPS 7333 Issues and Ethics in Sports Management**
Students will study ethical theories, moral reasoning, and ethical decision-making, and their value for sport managers. The application of ethical decision-making approaches relative to the major issues currently facing sport managers, and their impact on the operation of sport programs will also be addressed.

**HHPS 7334: Sport Marketing**
Students will develop an understanding and skill in the marketing process as relates to promotion & public relations activities in physical education, athletics and commercial sport operations. Primary focus will be on the application of marketing principles to specific sport scenarios.

**HHPS 7336 Fiscal Management in Sport Organizations**
This course is intended to provide students a general overview of many of the traditional and innovative revenue acquisition methods available for sport managers. Initial class time is devoted to helping students understand the fundamentals of finance, accounting, and the application of key financial techniques utilized in the administration and operation of a business, including: ration analysis, cash flow management, budgeting, and general investment strategies.
Subsequently, a large portion of the semester will cover a wide range of topics geared towards educating students to basic financial concepts and other financial issues related to the sports industry.

**HHPS 7337 Sport Facility and Event Management**
This course provides an overview of facility or venue planning and design for sport areas. Students will learn about several finance strategies used in financing facility development as well as risk management and safety concerns when developing and running sport venues and events. Students will learn the factors involved in managing sporting events.

**HHPS 7698 Project**
All students must pass comprehensive examinations before enrolling in this course. Prerequisites for Health Education: HHPS 7301, 7302, 7303, 7310, 7311, 5430, 7314. Prerequisites for Exercise Science: HHPS 7301, 7302, 7303, 7320, 7321, 7322, 7323, 7324. Prerequisites for Sports Management: HHPS 7301, 7302, 7303, 7330, 7331, 7332, 7333, 7334, 7335. Project preparation is a mid-level research experience for master’s degree students who have elected the special project option. With the guidance of a research committee, the student will plan, conduct, and prepare a written and oral report on a specific master’s-level project containing some original research.

**HHPS 7699 Thesis**
All students must pass comprehensive examinations before enrolling in this course. Prerequisites for Health Education: HHPS 7301, 7302, 7303, 7310, 7311, 5430, 7313. Prerequisites for Exercise Science: HHPS 7301, 7302, 7303, 7320, 7321, 7322, 7323, 7324. Prerequisites for Sports Management: HHPS 7301, 7302, 7303, 7330, 7331, 7332, 7333, 7334, 7335. Thesis preparation is designed to provide students with graduate-level research experience. Under the direction of the student’s major advisor and graduate committee, the student will carry out original research to support her/his thesis.

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**HIST – History**

**HIST 5302 Magic, Science, and the Occult from Antiquity to Newton**
A survey of human attempts to explain and control the cosmos from antiquity to the emergence of modern science around 1700, including the contributions of pseudo scientific, occult, and magical world views; internal developments in the history of science; and the relationship between scientific thought and the historical context. Three credit hours.

**HIST 5303 The Roman Revolution**
This seminar will examine the fall of the Roman Republic and the rise of the Roman Empire. Students in this seminar are expected to acquire a reasonable mastery of major events and developments of this transitional period and to demonstrate at least adequate skill in written analysis of this material.
HIST 5304 Alexander the Great
This undergraduate/graduate seminar will examine the career of one of the most interesting and important figures in world history. Alexander expanded the domain of Greek civilization from the Mediterranean and Aegean Seas to the lands of Afghanistan and India. Three credit hours.

HIST 5305 Environmental History
Humanity’s interrelationship with the natural environment through historic times; emphasis on historical factors relating to current environmental problems.

HIST 5306 History with Objects I
The role of objects in U.S. History including how different academic disciplines study artifacts; how to identify, authenticate, and evaluate artifacts (using decorative arts to learn visual literacy); and the impact of objects (especially their manufacturing and marketing) on American life.

HIST 5312 Medicine, Miracles, and Magic: Early History of Healing in Medieval and Renaissance Europe
A holistic examination of various ways in which Europeans sought to cure disease in pre-modern time. Magic, folk cures, and miracles, as well as the work of physicians, apothecaries, and barber surgeons. The emergence of medicine as a profession and a science. How university-trained physicians came to dominate the healing professions. Three credit hours.

HIST 5313 Apocalypse Now and Then: A History of Apocalyptic Thought and Movements
This course offers a history of beliefs about the end of the world in the western Judeo-Christian tradition. Through lectures and readings, we will examine such topics as the birth of apocalyptic thought, the medieval development of various aspects of traditions about the End (such as the figure of Antichrist and millenarian traditions), millennial influences on the discovery and colonization of the New World, millennial influences on the discovery and colonization of the New World, millennial movements of the last two centuries (such as the Millerites and the Mormons), and contemporary apocalyptic scenarios. A major theme of the course will be flexibility of apocalyptic language, its ability to interpret various historical situations, and its power to move people to acceptance or action. Three credit hours.

HIST 5314 A History of the Future: Millennial Visions in Film and Literature
Examines past moments in which people take stock of the present by gazing into the future. Through literature and film, studies predictions of the future in their historical contexts. Looks at positive and negative views of the future, secular and religious predictions for humans’ fate. Three credit hours

HIST 5315 Religious History of the United States
Development of Protestantism including evangelicalism, new denominations, and fundamentalism; incorporation of Catholicism and Judaism into mainstream; relationship between religion and social and political issues including church and state; minority religious
beliefs and organizations; varying role of men and women in religious organizations. Three credit hours.

**HIST 5318 Modern Revolutions: From France to China**
A comparative examination of five modern revolutions: the French Revolution (1789-1815), The Meiji “Restoration” in Japan (1853-1890), the Mexican Revolution (1910-1920), the Russian Revolution (1917-1932), and the Chinese Revolution (1919-1949). We will consider such issues as the extent of real turnover in the state apparatus, the prevalence of state-driven “revolutions from above” as opposed to classic “revolutions from below” in modern history, the balance of internal and external causation, and the nature of revolutionary violence. Three credit hours.

**HIST 5345 Chinese Film and History**
This course looks at the traumatic twentieth century through the lenses of Chinese filmmakers, particularly focusing on how a century of revolution affected urban and rural areas, the roles of women, and the daily lives of people in general. Three credit hours.

**HIST 5350 The United States and the Middle East**
The development of American foreign policy in the Middle East from the Treaty of Versailles to the emergence of Al-Qaeda.

**HIST 5363 Law in American History**
The development of legal institutions in America from their English origins to the present. The rule of law, legal thought and the legal profession, the independent judiciary, civil rights, and the law’s role in economic development. Three credit hours.

**HIST 5373 History of Family and Childhood in Modern Europe**
The course introduces students to the history of childhood and family life in the nineteenth and twentieth Century Europe.

**HIST 5375 Modern Mexican History**
A study of the emergence of the modern Mexican state. Historical dimensions of contemporary Mexico are explored through a focus on the 1910 Mexican Revolution and its aftermath. Political party formation, agrarian reform, and labor organizations are investigated along with the role of cultural institutions in institutionalizing change. Graduate students with credit for 4375 may be allowed to take 5375 with consent of the instructor.

**HIST 5378 The History of U.S.-Latin American Relations**
Survey of U.S. – Latin American relations from the pre-Columbian period to the present with emphasis on the nineteenth and early twentieth centuries. Focus on the diplomatic and economic relationships, including dollar diplomacy, intervention, dictatorship, and revolution. Three credit hours.

**HIST 5391 Seminar in United States History.**
Prerequisites: History 2311, 2312, three hours of upper-level United States history. Advanced
study of a topic in United States history chosen by instructor; includes a major research and writing project incorporating the department’s goals of identifying a problem; establishing a thesis; gathering, evaluating, and analyzing evidence; and writing in an appropriate scholarly format. Six credit hours.

**HIST 4390/5390 Special Topics in History**  
Prerequisites: Specialized study of selected topics in history. Course content changes each semester; refer to the semester class directory. Students with credit for HIST 4390 may enroll in HIST 5390 with approval of the instructor. Three credit hours.

**HIST 4393/5393 Seminar in World History**  
Prerequisites: History 1311, 1312, three hours of upper level non-U.S. history. Advanced study of a topic in non-U.S. history chosen by instructor; includes a major research and writing project incorporating the department’s goals of identifying a problem; establishing a thesis; gathering, evaluating, and analyzing evidence; and writing in an appropriate scholarly format. Three credit hours.

**HIST 5396 Seminar in Arkansas History**  
Discussion, directed readings, research, writing on selected issues. Topics vary each semester; may be repeated once with new topic.

**HIST 5397 Teaching Applications**  
This course links social studies content with practical applications for classroom instruction and curriculum design. Students study history, geography, political science, anthropology, economics, and psychology contained in the state social studies framework for grades 7 – 12, and learn how to plan and detach social studies lessons, units, and curriculum maps. HIST 5397 is not open for students with credit for HIST 4397.

**HIST 7311 Introduction to Public History**  
History, philosophy, purposes of historical agencies; archives; museum organization, operation; cultural resource management; relationship of historians and business community; historians as consultants; professional ethics.

**HIST 7315 Seminar in Historical Methods**  
Basic skills, techniques for historical research; models for use, interpretation of evidence; problem of historical causation; bibliography, techniques for defining, focusing research projects; steps in research planning, design, presentation.

**HIST 7320 Archival Management**  
Techniques of managing contemporary archives; includes methods of document preservation, organization of manuscripts and archival records, administrative systems, philosophy of archival control; experience with actual collections.

**HIST 7321 Archival Conservation**
Restoration of historical books, documents; includes conservation fundamentals, paper repair methods, book restoration, basic bookbinding techniques; experience with actual collections.

**HIST 7330 History Museum Administration**
Theoretical, practical aspects; includes purpose of museums, their intellectual and ethical responsibilities, organizational problems inherent in pursuit of these aims.

**HIST 7331 History Museum Interpretation**
History, functions of historical museums; focus on role as research and educational institutions; includes possibilities, problems of interpreting history for the general public; joint research on a specific problem with local museum staff.

**HIST 7341 Historic Preservation and Restoration**
Definition, rationale, methods, techniques of preservation; problems of restoration, preservation of historic spaces, buildings; national, state preservation law, agencies; case studies; site surveys; field trips to preservation projects.

**HIST 7352 Historical Parks Planning and Development**
Discussions, directed readings, research, writing on issues related to planning, development of historic parks; includes identifying and protecting historical resources, land use, staffing requirements, long- and short-term planning, governmental policy, funding, other topics.

**HIST 7355 Community History**
This course introduces students to the research practices, challenges, and community engagement opportunities associated with local history. Major themes include research in archival and online collections; working with community entities such as schools, non-profit agencies, local government, libraries, museums, and historical societies; and avenues for disseminating research to community audiences. The class is designed to incorporate technology through content delivery, examination of primary source documents, and in student work and presentations.

**HIST 7360 Historical Editing: An Introduction**
History of historical journal, documents editing, publishing historical materials.

**HIST 7370 Oral History**
Innovative approach to teaching and learning of history; emphasis on creation, processing, curating, use of oral history materials.

**HIST 7372 Digital History**
In this class, we will explore the emerging field of digital history by both reading scholarly works and building a website. Our readings will examine digital production, information architecture, oral histories, and audio documentaries. Our website will include a digital file of an interview, scanned historical sources, and an exhibit. At the end of the class, students will know the theoretical background of digital history and will know how to plan, collect, and digitally publish a public history website.
HIST 7380 Directed Study in Public History
Prerequisites: consent of coordinator and, if applicable, supervisory agency. Student chooses to do either a practicum with a local agency or assigned readings and research on issues involving public history. Topics vary each semester.

HIST 7391 Seminar in Public History
Prerequisites: History 5303, 7311, 7315. (Open only to students in the program.) Directed readings, research on specialized topics in public history; concentrates on skills basic to all public history specialization areas, team-research experience.

HIST 7392 Seminar in Early America
Discussion, directed readings, research, writing on selected issues. Topics vary each semester; may be repeated once with new topic.

HIST 7393 Seminar in 19th-Century America
Discussions, directed readings, research, writing on selected issues. Topics vary each semester; may be repeated once with new topic.

HIST 7394 Seminar in 20th-Century America
Discussions, directed readings, research, writing on selected issues. Topics vary each semester; may be repeated once with new topic.

HIST 7395 Special Problems in History
Major individual research project or directed readings in consultation with and under supervision of a faculty member. Topics vary each semester; may be repeated once with new topic.

HIST 7396 Seminar in History
Discussion, directed readings, research, writing on selected issues in American, non-American history. Topics vary each semester; may be repeated once with new topic.

HIST 7398 Internship
Prerequisites: 24 program hours; consent of coordinator. Employment, practical experience in community agency, under professional guidance, in concentration area; requires written report.

HIST 7399 Thesis Seminar
In this class you will plan, design, research and write your thesis for the MA program in Public History. We will use Turabian’s “Manual for Writers” and the History Department’s “MA Thesis Guidelines” as a map to work through the different stages of a master’s thesis. Students should repeat this class in two consecutive semesters.

HIST 7699 Thesis
Prerequisite: consent of coordinator. Scholarly investigation involving original research.
IDST – Interdisciplinary Studies

**IDST 7310 Introduction to Interdisciplinary Studies**
This course will help students refine their abilities to read and think critically, to understand and make effective arguments, to study and practice research techniques, and to communicate effectively in writing. Students will study interdisciplinary processes and formulate an interdisciplinary research project. A sampling of texts from various disciplines will be considered from an interdisciplinary perspective. The course is only offered in the fall.

**IDST 7390 Interdisciplinary Studies Colloquium**
Prerequisite: IDST 7310. The colloquium has a general course topic and focuses on interdisciplinary reading, writing, and research. The course helps students to sharpen their abilities to communicate effectively across disciplines by sharing data, research methods, and writing techniques. Students will participate in active dialogue in the classroom by presenting and interdisciplinary research project on the selected class topic. MAIS students should enroll after completing IDST 7310 and 9 hours of graduate credit. Students outside the program may enroll only with consent of instructor. This course will be offered each spring.

**IDST 7396 Special Topics in Interdisciplinary Studies**
Discussion, directed readings, research, writing on selected issues in interdisciplinary studies. Topics vary each semester. May be repeated once with new topic.

**IDST 8310, 8320 Interdisciplinary Studies Thesis/Final Project**
Students will complete six hours of consecutive thesis/final project coursework as agreed upon by the student, the program coordinator, and the student’s thesis/final project committee.

IBUS – International Business

**IBUS 5316 Field Study in International Business**
Prerequisite: Completion of MBA Foundation courses or equivalent. This course includes an international trip which provides students an opportunity to explore firsthand the international dimensions of business, to identify and pursue strategic issues in businesses, and to gain an awareness of how cultural, economic, political, and legal environments influence business practices. Prior to travel, students study and prepare reports on the country to be visited, and upon return, prepare summaries of their experiences, comparing pre- and post-visit perceptions. This course has a fee for travel costs and host institution fees.

**IBUS 8201 Seminar in International Business II**
Only open to Executive MBA students. Prerequisites: IBUS 8300 and IBUS 8400. Continues the study of management forces impacting an international business environment for a multinational corporation. Topics include international investment theories, foreign direct investment, foreign exchange markets, foreign currency translation, transfer pricing and issues in international taxation, performance evaluation and financial statement analysis.
**IBUS 8300 Field Study in International Business**
Only open to Executive MBA students. Prerequisites: IBUS 8400. An international trip that provides an opportunity for students to explore first-hand the international dimensions of business. It provides the student with opportunity to identify and pursue strategic issues in international business and to gain consciousness of the impact of culture on business practices. Students will do extensive research on a country and prepare a report detailing business and cultural practices with political and economic components prior to travel. Upon return, students will prepare a written summary of their experiences and compare expectations prior to the field study with the realities of international business.

**IBUS 8400 Seminar in International Business I**
Only open to Executive MBA students. A study of management forces impacting an international business environment for a multinational corporation. Topics include the fundamentals of international business management, international marketing and international economics. It provides an overview of international business, its history, trends, and possible future direction as well as the phenomena that impact it.

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**IFSC – Information Science**

**IFSC 5199, 5299, 5399 Special Topics**
Advanced, specialized topics of current interest in information science. May be repeated for no more than 12 hours of credit. One, two, three or four credit hours.

**IFSC 5325 Data Mining Concepts and Techniques**
Prerequisites: IFSC 4325: IFSC 3330 or equivalent or consent of instructor and Graduate status for IFSC 5325. This course provides in-depth, practical coverage of essential data mining topics, including OLAP and data warehousing, data preprocessing, concept descriptions, association rules, classification and predication, and cluster analysis. It addresses advanced topics such as mining object-relational databases, spatial databases, multimedia databases, time-series databases, text databases, the World Wide Web, and applications in several fields. Three hours lecture. Three credit hours.

**IFSC 5330 Database Security**
Prerequisite: IFSC 3330 or equivalent or consent of the instructor. Focus on security issues in databases systems and introduction of how current and future commercial systems may be designed to ensure secrecy and confidentiality. Topics include security models, basic security mechanisms and software, statistical database security, intrusion detection, security models for next generation databases, tested techniques and proven strategies for securing an Oracle environment — from the operating system to the database to the network, and how to implement security using Oracle’s built-in tools. Three hours lecture. Three credit hours.

**IFSC 5339 Network Security**
Prerequisite: MATH 1304 or equivalent and IFSC 3315 or CPSC 4384 or SYEN 3332 or MGMT
4310 or consent of the instructor. This course provides students with a concise and in-depth overview of security issues in current computer networks. It first gives a brief introduction of cryptographic algorithms and protocols underlying network security applications, including encryption, hash function, public key algorithm, digital signatures, and key exchanges. Then, it focuses on the security issues in current computer networks as well as network security tools and applications, including Kerberos, X.509v3 certificates, PGP, S/MIME, IP security, SSL/TLS, SET, and SNMPv3. The course will cover network intrusion-detection techniques and systems. Three hours lecture. Three credit hours.

**IFSC 5345 Information Visualization**
Prerequisites: MATH 1451 and IFSC 2300. The design and presentation of information. Use of graphics, animation, sound, visualization software, and hypermedia in helping users understand information. Methods of presenting complex information to enhance comprehension and analysis. Incorporation of visualization techniques into human-computer interfaces. Three hours lecture. Three credit hours.

**IFSC 5360 Social Computing**
Prerequisite: IFSC 1310 and IFSC 2300, or equivalent, or consent of Instructor. A hands-on course focusing on concepts of the social and information networks, Web as graph, models (such as Power law distribution, scale-free models, preferential attachment models, etc.) that simulate behavioral characteristics of these graphs, basic graph theoretical concepts, characteristics of social media and Web 2.0 or the Social Web (such as blogs, microblogging, social friendship networks, social bookmarking, social news, social media sharing, wikis, etc.), understanding and developing API and mashups, issues and challenges in data crawling and web analytics, network data visualization, exposure to information extraction and retrieval concepts aiming at the highly dynamic and noisy nature of social media, harnessing the collective and web intelligence, and basic concepts of cloud computing. Three lecture hours. Three credit hours.

**IFSC 7100, 7200, 7300 Independent Study**
Prerequisite: graduate standing and consent of the instructor. Individual study of a topic in information science under the supervision of the instructor. Topics determined in consultation with supervising faculty member. Agreement must be in writing and filed with the department. Student’s work will be evaluated by the instructor and documented through reports or other written means. Varies between one and three credit hours.

**IFSC 7101 Research Methodology**
Prerequisite: Graduate standing. A one-credit course in a set of three, introducing students to the research methodology of doctoral level research in the Integrated Computing field. Research examples will be drawn from work that exemplifies the interconnecting research opportunities across the Integrated Computing discipline. One credit hour.

**IFSC 7102 Research Tools**
Prerequisite: Graduate standing. A one-credit course in a set of three, introducing students to the research tools of doctoral level research in the Integrated Computing field. Research
examples will be drawn from work that exemplifies the interconnecting research opportunities across the Integrated Computing discipline. One credit hour.

**IFSC 7186-7686 Graduate Project**
Prerequisite: graduate standing and consent of the student’s graduate advisor. Students, under faculty supervision, will conduct an applied investigation on a particular problem or area of information science in a practitioner setting that results in a report and other deliverables appropriate to the project. Varies between one and six credit hours.

**IFSC 7192 Graduate Seminar**
Prerequisites: Graduate standing, consent of graduate coordinator. Students, faculty, and invited speakers will present discuss and exchange ideas on research topics of general interest to the graduate programs in the EIT college. One-hour session per week. Course may be repeated for credit. Graded: credit/no credit.

**IFSC 7198-7698 Graduate Thesis**
Prerequisite: consent of thesis advisor. Scholarly investigation of a selected problem in information science culminating in a written, orally defended thesis. Maximum of six hours may be applied to M.S. Varies between one and six credit hours.

**IFSC 7310 Information Systems Analysis**
Methods of problem identification and definition, data collection and measurement, feasibility study methods, work measurement techniques, task analysis, simulation studies, impact analysis, evaluation methods, forms and display design, proposal writing, documentation and programming standards, design strategies, documentation, and evaluation. Three credit hours.

**IFSC 7320 Database Systems**
The course covers two major areas. It first introduces principles and methodologies of database design, and basic techniques for database development. Then it introduces the fundamentals of information architecture and helps students understand how information architecture acts as the supporting structure aligning application design, technology, and business goals. Three credit hours.

**IFSC 7321 Information Science: Principles and Theory**
Prerequisite: Graduate Standing. This course surveys the major topics in information science including a discussion of entropy, value strategies, security, extraction, and emission of information. Three credit hours.

**IFSC 7325 Advanced Data Mining Applications**
Prerequisites: IFSC 4325 or equivalent. This is an advanced course on data mining. The focus will be on new data mining techniques and their applications in health information systems, text mining and biological data mining. The course will include presentations and discussions of research papers and projects closely related to topics in data mining. The research papers will be
selected from the course supplementary materials and consists of recently published topics on data mining and their applications. Three credit hours.

**IFSC 7330 Information Systems Security**
Prerequisite: MATH 2310 or equivalent, and IFSC 3320 or equivalent. This course aims at providing a solid theoretical foundation in Information Systems Security, including both Computer Security and Communications Security. The security issues in information systems as well as techniques for ensuring information systems security will be studied. The course will focus on the study of security policies, models, and mechanisms for secrecy, integrity, and availability. The basic principles of information systems security will be discussed, including basic cryptography and its applications, security in computer networks and distributed systems, access control models and mechanisms for database security, multilevel database security, stenography, Internet security, and control and prevention of viruses and other rogue programs.

**IFSC 7331 Network Science**
Study of network representations of physical, biological, and social phenomena leading to predictive models. This course will focus on the graph-theoretical, statistical and algorithmic foundations of network science. The course is designed for an interdisciplinary graduate audience with an information or computational science or engineering background, or by consent of the instructor. Three hours lecture. Three credit hours

**IFSC 7350 Electronic Commerce**
Prerequisite: Doctoral-level standing by student or consent of instructor. Seminar style course designed for doctoral level student to be able to explore jointly the field of electronic commerce theoretically, conceptually and through applications including electronic markets, strategy, business models, impacts of information and communication technologies, organization and social behavior, as well as selected economic perspectives. Three credit hours.

**IFSC 7360 Data Protection and Privacy**
This course considers the current status of data, information and privacy protection policies, laws and technologies. At the core is the variety of issues concerning informational privacy, i.e. the gathering, creating, storing, use and protection of information and data about individuals. Topics include the economics of data and privacy protection *vis-a-vis* the right of access to information, control, ownership, free flow, accuracy and use of information; commercial uses of personal information such as data mining and other marketing techniques, as well as the roles of government and the private sector in this setting. Newer information technologies, data mining, security measures, genetic tests and biobanks worldwide have raised important issues and questions. Three credit hours.

**IFSC 7370 Data Science and Technologies**
Prerequisites: graduate standing plus the following courses: IFSC 7320 or CPSC 7351 along with a working knowledge of Java programming, or consent of the instructor. This course provides a survey of the skills and concepts needed for managing, processing, and analyzing massive amounts of data in real-time. Topics covered include data sourcing, storing and sharing,
integration, and data mining strategies along with hands-on experience working with sample technologies selected from a complex ecosystem of tools and platforms. Three credit hours.

**IFSC 7399 Special Topics**  
Prerequisite: graduate standing and consent of the instructor. The course explores an emerging or advanced, specialized topic of current interest in information science. May be repeated for credit when the topic varies. Three credit hours.

**IGSC – Integrated Science and Mathematics**

A list of courses in Integrated Science (IGSC) with descriptions is provided below. Course listings and descriptions for earth science, environmental science, and physics are found in the “Non-program Courses” section in this Catalog. For a list of available courses in biology, chemistry, and applied science, please visit the “Master of Science in Biology,” “Master of Science and Master of Arts in Chemistry”, and the “Master of Science and Doctor of Philosophy in Applied Science” sections in this Catalog.

**IGSC 5401 Integrated Science Methods**  
Prerequisite: At least 16 hours of science. This course incorporates lecture, laboratory work, and field methods to stress the learning of science as an active, integrated constructive process that involves experimentation, investigation, communication, reasoning and problem solving as they apply to life, earth and physical systems. Three hours of lecture per week and two hours of laboratory per week.

**IGSC 7192,7292,7392 Independent Study**  
Independent study provides an opportunity for students to gain depth in a specialized area to support a particular aspect of their degree program. The specific topic and course of study for the independent study will vary by student. The student will develop the course of study in collaboration with a faculty member in the department and their academic adviser.

**IGSC 7195/7295/7395 Internship in Integrated Science and Mathematics**  
Prerequisites: graduate standing and consent and approval of assignment by advisor. Supervised professional experience related to students discipline with governmental agencies, industry and consulting firms. Forty hours supervised work per credit hour. One, two, or three credit hours.

**IGSC 7199, 7299, 7399, 7499 Special Topics**  
Prerequisites: variable, depending on instructor and course content. Courses will cover topics that draw from two or more scientific disciplines and that can be best taught from an integrated perspective. Credit and laboratory/lecture format vary depending on the topic. One hour of credit per one hour of lecture; one hour of credit per two-three hours of laboratory.

**IGSC 7301 Higher Order Thinking in Science**  
Prerequisite: consent of the instructor. Laboratory-based; stresses the learning of science as
active, integrated, constructive processes involving experimentation, investigation, communication, reasoning, and problem solving; show connections and relevant applications in life systems, earth systems, and physical systems; goals include helping teachers extend content learning and create successful learning environments for every student through use of manipulative s, calculators, science equipment, and various learning strategies; provides access to appropriate materials, equipment, and technology. Two hours of lecture and two hours of laboratory per week.

**IGSC 7391 Cooperative Education in Integrated Science**
Prerequisites: Graduate standing and consent and approval of assignment by advisor. Supervised professional experience related to students discipline with governmental agencies, industry, and consulting firms. This course requires a minimum of 200 semester work hours. Three credit hours.

**IGSC 8100, 8200, 8300 Thesis Research**
Under the supervision of the student’s major advisor, along with the graduate advisory committee, the student will carry out original research to support his thesis. May be taken for a maximum of six hours.

**INFQ – Information Quality**

**INFQ 7191, 7291, 7391 Cooperative Education in Information Quality**
Prerequisite: Graduate standing and approval of assignment by the faculty sponsor and the graduate coordinator. Complements and extends the classroom experience by allowing the student to apply the concepts of information quality improvement in the work place. The exact number of hours per week, activities, and responsibilities of the work are dependent on the nature of the work experience and must be specified in written agreements coordinated with the UALR Office of Cooperative Education between the student, the sponsoring faculty member, and the employer. At a minimum, a written report and 12 hours per week for a 3 credit hour semester course, 8 hours per week for a 2 credit hour semester course, and 4 hours per week for a 1 credit hour semester course with the participating employer are required. The course may be repeated for credit. The course cannot be used for credit toward the requirements for the Masters in Information Quality degree without the special approval from the MSIQ Graduate Coordinator.

**INFQ 7300 Independent Study**
Prerequisite: graduate standing and consent of the instructor. Independent study in Information Quality is given under the direction of a faculty member. The different topics for independent study can be, but not limited to: Research and Reading, Information Quality Software Development, Research Project on Information Quality, etc. as long as the topic is not offered in regularly scheduled course offerings. Upon the completion of the course, the student is typically required to submit a written report with content and quality comparable that required for a conference or journal such as the International Conference in Information Quality or the ACM Journal of Data and Information Quality. Written proposal and final product required. No more than three hours may count toward concentration requirements. Additional hours may fulfill cognate requirements. May be repeated once for degree credit.
INFQ 7303 Principles of Information Quality
Prerequisites: IFSC 2300 or equivalent. This course provides a rigorous exploration of information quality concepts, assessment, and problems in organizational information systems, databases and data warehouses. A combination of state of the art literature review and hands-on projects is used to develop knowledge and ability to meet objectives. Three hours lecture. Three credit hours.

INFQ 7318 Total Quality Management and Statistical Quality Control
Prerequisites: STAT 2350 or equivalent. This course provides an understanding of how the concepts and techniques of Total Quality Management may be applied to information products. Topics include continuous improvement strategies, statistical process control, experimental design, capability analysis, quality cost assessments, benchmarking, acceptance testing, and auditing. Three hours lecture. Three credit hours.

INFQ 7322 Information Quality Theory
Prerequisite: INFQ 7303. This course is designed to provide students with the theoretical foundations critical for developing a deep understanding of the state-of-the-art information quality research from the technical, organizational and strategic perspectives. This course will prepare students to work on their thesis, project and conduct research in the field of information quality. More specifically, students will be exposed to concepts, principles, tools and models and techniques that are essential for information quality definitions, measurement, analysis and improvements. Additionally, students will be exposed to most current, cutting-edge research that goes beyond current industry practice in information quality. Three hours lecture. Three credit hours.

INFQ 7337 Project and Change Management
Prerequisites: INFQ 7303. A course on how to manage information quality improvement projects within an organizational context, including the processes related to initiating, planning, executing, controlling, reporting, and closing a project. Additional topics include identifying project champions, working with user teams, training, documentation, project integration, scope, time, cost-benefit studies, risk analysis, and change management. Three hours lecture. Three credit hours.

INFQ 7342 Information Quality Tools and Industry Landscape
This course is designed to develop and increase capability and skills that students need to critically understand what IQ software tools, techniques and prototypes are currently used in industry, government and research laboratories. The course will prepare students to make software tool recommendations on corporate data quality programs. Students will conduct a survey of academic literature and industry practices in terms of IQ tools such as data cleansing, profiling, and auditing and will participate in a hands-on workshop on commercial IQ tools from participating vendors in the field. Two hours lecture and three hours lab per week. Three credit hours.

INFQ 7348 Entity Resolution and IQ
Prerequisite: INFQ 7342 or consent of instructor. An examination of the theory and practice of entity resolution (ER), and the relationship between ER and information quality. Topics include the primary activities of ER, the major ER system architectures, methods and techniques for determining reference equivalence, major theoretical models for ER, entity-based data integration, ER case studies, and hand-on ER exercises with commercial and open-source ER tools.

**INFQ 7353 Case Studies for Information Quality Professionals**
Prerequisites: INFQ 7322 and INFQ 7342. This intensive and interactive course is designed to develop and increase the student’s capability and skills to critically understand what constitutes data quality, how to analyze and solve data quality problems, and how to institutionalize data quality projects in an organization where data quality is not the most critical priority. Three hours lecture. Three credit hours

**INFQ 7367 Information Quality Policy and Strategy**
Prerequisite: INFQ 7322. This course explores the top management, strategic perspective for aligning competitive strategy, core competencies, and information quality. Topics include the development and implementation of IQ policies and plans to achieve organizational goals; how to define systems that support the operational, administrative, and strategic IQ needs of the organization, its business units, and individual employees; approaches to managing technology and the information systems function in organizations, role of the CIO. Three hours lecture. Three credit hours.

**INFQ 7386, 7686 Graduate Project**
Prerequisites: Graduate standing and consent of the student’s graduate advisor. Students, under faculty supervision, will conduct directed research on a particular problem or area of information quality and will produce reports and other deliverables appropriate to the project. 7386 may be repeated over two semesters.

**INFQ 7399 Special Topics**
Prerequisite: graduate standing and consent of instructor. The course explores on an experimental or temporary basis advanced topics in information quality not included in the established curriculum. Content, subtitle, organization change each time offered, based on interest.

**INFQ 7198-7698 Thesis**
Prerequisite: Consent of thesis advisor. Student’s should have completed at least 15 hours of the program core, or have had substantial professional experience in information quality management.
Communication methods/systems and languages (English and American Sign Language) used by children and adults who are deaf or hard of hearing; understanding the intra- and cross-cultural communication issues that provide the impetus for choice of communication method and/or language; focus will be on development of conceptually accurate sign language skills utilizing English structure in an interactive approach for receptive and expressive sign language fluency. Offered in spring.

**INTS – International Studies**

**INTS 5301 Independent Study in International Studies**  
An advanced exploration of an issue/topic in international studies, resulting in a major research project or a series of smaller research projects. The topic is chosen in consultation with the course instructor, and a second faculty reader is required. Can be repeated for credit.

**INTS 7301 Advanced Independent Study in International Studies**  
An advanced exploration of an issue/topic in international studies, resulting in a major research project or a series of smaller research projects. The topic is chosen in consultation with the course instructor, and a second faculty reader is required. Can be repeated for credit.

**LANG – General Foreign Language**

**LANG 5322 Teaching Second Languages**  
Prerequisite: baccalaureate degree. Methods and materials used to teach skill development in modern second languages; techniques considered most effective and appropriate assessment strategies. Required for foreign language teacher licensure and the ESL endorsement in the state of Arkansas.

**LANG 5323 Second Language Acquisition**  
Prerequisite: baccalaureate degree. How second language is acquired by children and adults. A course for those preparing to teach students with limited English proficiency. Required for ESL endorsement in the state of Arkansas.

**LANG 5324 Teaching People of Other Cultures**  
Prerequisite: baccalaureate degree. Cultural issues for teaching students with limited English proficiency. A required course for ESL endorsement in the state of Arkansas.

**LANG 5325 Second Language Assessment**  
Prerequisite: baccalaureate degree. Examines goals, principles, instruments, and techniques of assessment and testing of second language learners, K-12 and adult. A required course for ESL endorsement in the state of Arkansas.

**LANG 7100, 7200, 7300 Workshop**  
Interaction between students and professor on topic relevant to teaching in the discipline.
LANG 7311 Teaching Listening and Speaking
Theory and techniques of teaching the skills of listening and speaking; skill-building strategies appropriate for novice through advanced language learners; assessment mechanisms designed for appropriate performance at each level.

LANG 7312 Teaching Reading and Writing
Theory and techniques of teaching the skills of reading and writing; skill-building strategies appropriate for novice through advanced language learners; assessment mechanisms designed for appropriate performance at each level.

LANG 7314 Second Language Practicum
Prerequisite: LANG 5322.
Practical application of the principles of second language teaching in public elementary and secondary schools, Intensive English Language Program, and adult ESL learning environments.

LANG 7350 Research in Second Language Education
Understanding and critiquing research in second language education; includes a student-generated research project on a current topic in second language education.

LANG 7699 Thesis
Prerequisites: Completion of basic core, LANG 5322, 5323, 5324, 5325, 7311, 7312, and 7350, and the consent of the Graduate Program Coordinator. Students will develop a thesis proposal, thesis description, survey of the relevant literature, time-table for completion, and names of committee members and submit this proposal to the Graduate Program Coordinator for approval.

MATH – Mathematics

MATH 5199, 5299, 5399 Selected Topics
Prerequisites: graduate standing, consent of instructor. Content varies; see semester schedule. One hour lecture per week for each hour of credit. Offered on demand.

MATH 5301 Analysis I
Prerequisites: MATH 2307, 3312. Real number system, Euclidean n-space, complex numbers, topology of general metric spaces, continuous functions, point-wise and uniform convergence, series, the derivative. Offered on demand.

MATH 5302 Complex Analysis
Prerequisite: grade of C or greater in MATH 5303. Algebra of complex numbers, analytic functions, integration, power series, Laurent series, elementary conformal mappings. Three hours lecture per week.

MATH 5303 Advanced Calculus I
Graduate Courses - 2015-2016 Graduate Catalog

Prerequisites: MATH 2307, 3312. Real number system, sequences, limits, continuity, metric spaces, convexity, derivatives, linear analysis, implicit function theorem.

**MATH 5304 Advanced Calculus II**
Prerequisite: MATH 4303/5303. Measure theory, geometry of curves and surfaces, differential forms, Stoke’s theorem, and Green’s theorem.

**MATH 5305 Financial Mathematics**
Prerequisites: Math 1451 or equivalent. Determining equivalent measures of interest; discounting; accumulating; determining yield rates; estimating the rate of return on a fund; amortization. Three credit hours.

**MATH 5308 Integral Transform Theory**
Prerequisite: MATH 3322. Linear differential equations; Laplace transform; functions of complex variable, integration by method of residues, Laplace transform inversion integral; Z- transform, Z-transform inversion integral, difference equations; Fourier series, Fourier transform.

**MATH 5323 Numerical Analysis**
Prerequisites: MATH 2307 or equivalent, 3312 or equivalent; scientific programming language. Error analysis, solutions of equations, interpolation, approximations, numerical differentiation and integration, linear systems.

**MATH 7311 Advanced Linear Algebra**
Prerequisite: MATH 3312. Vector spaces, subspaces, linear independence and dependence, basis and dimensions; linear transformations, null space, rank, isomorphism, inner product spaces, norms, inner products, orthogonal sets, orthogonal projections, bilinear and quadratic forms; eigen values and eigen vectors, similar matrices, diagonalization, symmetric and Hermitian matrices. Jordan canonical form. Three lecture hours per week.

**MATH 7312 Computational Linear Algebra**
Prerequisites: MATH 3312 and MATH 4323. LU decomposition; QR factorization; Iterative techniques for solving systems of equations, Gauss-Seidel; Eigen value problem, iterative and direct techniques, The Condition Number; Lanczos Algorithm. Three lecture hours per week.

**MATH 7322 Advanced Differential Equations**

**MATH 7323 Advanced Numerical Analysis I**
Prerequisites: MATH 4323, 7311. Numerical solutions of linear operator equations, some nonlinear systems, optimization methods.

**MATH 7324 Advanced Numerical Analysis II**
Prerequisites: MATH 7323 and 7325. Numerical analysis of ordinary and partial differential equations. Three lecture hours per week.

**MATH 7325 Partial Differential Equations**
Prerequisites: MATH 3322 or equivalent course. First order equations in two independent variables, the method of characteristics, discontinuous and weak solutions; Linear second order equations, elliptic equations, hyperbolic equations, parabolic equations; Fourier series. Three lecture hours per week.

**MATH 7326 Optimization**
Prerequisites: MATH 3312 and 3322 or equivalent courses. Linear and nonlinear programming. Three lecture hours.

**MATH 7327 Graph Theory**
Prerequisites: MATH 3312 or equivalent course. Graphs and subgraphs; trees; connectivity; Euler tours and Hamiltonian cycles; matchings; planar graphs; directed graphs; networks. Three lecture hours per week.

**MATH 7330 Theory of Finite Element Methods**
Prerequisites: Math 2453 and Math 3322 or equivalent. Finite element method is a numerical technique for finding approximate solutions of partial differential equations. It has strong applications in engineering. This course will provide mathematical foundation for finite element method. Three lecture hours per week. Three credit hours.

**MATH 7350 Mathematical Statistics I**
Probability measures, combinatorial theory, random variables, continuous and discrete distributions, expectations, moments, jointly distributed random variables, independence, functions of a random variable, limit theorems.

**MATH 7351 Mathematical Statistics II**
Sampling, sampling distributions, order statistics, point estimators and their properties, interval estimators and their properties, tests of hypotheses, linear models, nonparametric methods.

**MATH 7352 Mathematical Statistics III**
Prerequisites: MATH 7350. Multivariate distribution theory and quadratic forms; Linear models and least squares; Analysis of categorical data; Non-parametric statistics; Decision theory and Bayesian inference. Three lecture hours per week.

**MATH 7353 Linear/Non-Linear Regression**
Prerequisites: MATH 7350. Differentiation of vectors and matrices; random vectors and matrices; distribution theory; full rank linear regression models; non-linear regression models. Three
lecture hours per week.

**MATH 7354 Experimental Design**
Prerequisites: MATH 7350 (may be taken as a corequisite with the consent of the instructor). Single factor experiments; Randomized blocks and Latin square designs; factorial designs; repeated measures; nested designs; response surfaces. Three lecture hours per week.

**MATH 7313 Real Analysis**
Prerequisites: A grade of C or greater in MATH 4302/5302. Set theory and axioms, functions of a real variable, Lévesque measure, differentiation and integration, Branch Spaces

**MATH 7355 Sampling Techniques**
Prerequisites: MATH 7350 (may be taken as a corequisite with the consent of the instructor). Simple random sampling; sampling for proportions; stratified random sampling; ratio estimators; systematic random sampling; cluster sampling; acceptance sampling. Three lecture hours.

**MATH 7399 Selected Topics in Applied Mathematics**
Prerequisite: consent of instructor. Topics in mathematics, applied mathematics, and numerical analysis may include discrete mathematics; ordinary, partial differential equations; integral transforms; complex variables; optimization techniques, linear algebra; approximation theory; topology; geometry; abstract algebra; number theory. Topics in statistics may include statistical inference, sampling, linear models, biostatistics, stochastic processes, statistical computing. May be repeated for credit when topic changes. Offered on demand.

**MATH 8300 Master Research Project**
Prerequisite: 18 graduate hours. Research and individual investigation on a topic in applied mathematics.

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**MCED – Middle Childhood Education**

**MCED 7100, 7200, 7300 Workshop in Middle Childhood Education**
Hands-on experiences on various topics. Offered on demand.
MCED 7138, 7238, 7338 Topics in mathematics, education, and various topics of current interest to preschool, elementary, middle school teachers. Offered on demand.

**MCED 7138, 7238, 7338**
Topics in mathematics, education, and various topics of current interest to preschool, elementary, middle school teachers. Offered on demand.

**MCED 7301 Teaching Middle School Mathematics**
Methods and materials used in teaching middle school mathematics, grades 4-8, from a
constructivist point of view. Special attention given to the utilization of manipulatives in teaching all topics. Common Core State Standards and curriculum standards as identified by the National Council of Teachers of Mathematics are curriculum standards as identified by the National Council of Teachers of Mathematics covered, as well as instructional strategies for teaching them. Consideration given to contemporary problems, trends, and practices in the field.

**MCED 7302 Diagnosis and Remediation of Mathematics Learning Difficulties**
A study of the causes of mathematics learning difficulties, approaches to diagnosis, and some appropriate teaching strategies. Candidates review, discuss, and summarize research articles concerning diagnosis and assessment; analyze a variety of measurement devices; develop, construct, and administer two specific diagnostic tools; diagnose a specific learner’s performance in mathematics; and make recommendations for instruction.

**MCED 7303 Practicum/Internship in Mathematics Education**
Application of diagnosis, principles of remediation; laboratory experiences in evaluation, instruction of children; content relates to problems resulting from laboratory experience. Offered on demand.

**MCED 7305 Teaching Mathematics to the Gifted**
An overview of current philosophies, programs, and curricula for teaching mathematically gifted students. Topics include characteristics of mathematically gifted, development of appropriate classroom strategies, planning a differentiated curriculum, development of enrichment units, critical mathematics content and concepts, and course materials for teachers.

**MCED 7308 Teaching Economics in the Middle School**
Developing, implementing school techniques, activities related to an interpretation of the values in American society, economic concepts and principles. Offered in fall, spring, and summer.

**MCED 7312 Development of Young Adolescents**
Study of hereditary and environmental influences on the physical, intellectual, emotional, and social development of adolescents, the cultural, social, emotional, and intellectual differences as well as learning and problem-solving processes, self-esteem, and motivation as they apply to young adolescents.

**MCED 7313 Introduction to Middle Level Education**
This course covers the history, philosophy, and major concepts of middle level education. Organizational components of middle level schools, current issues and trends in middle level education, current research in reflective practice, and diversity in family structures are studied. Relationships between schools and community organizations, between schools and families, and between schools and diverse societies are discussed. Strategies are presented for working with families, state agencies, and community organizations, and for linking early adolescent learning to community resources. Assessment and evaluation of practice in middle level setting is conducted.
**MCED 7314 Teaching the Middle Level Exceptional Child in the Inclusive Classroom**
Enhances the knowledge and skills of middle childhood teachers to better educate students with exceptionalities in their classrooms. Collaboration in the design and implementation of individualized plans for students with disabilities and for students who are gifted. Acquisition of skills needed to support the implementation of behavior intervention plans and transition plans. Participation in the design and implementation of modifications for students with high abilities. Design and implementation of curriculum, materials, instructional strategies, and assessment modifications.

**MCED 7315 Middle Level Curriculum and Pedagogy**
A comprehensive research-based framework on cognition, learning, and classroom management. Focus on middle level student behavior in the design of curriculum, instruction, assessment, and classroom management strategies, as well as the evaluation of the impact of their efforts.

**MCED 7316 Literature for Young Adolescents**
Best possible options for associations between middle level students and literature. Literature-based learning and learning how to select a wide variety of books from the best examples of all genres is stressed. Early adolescent literature is read. Developmentally appropriate instructional procedures in reading and writing to aid in comprehension is stressed. Other topics include integrating literature in the content areas, literature study circles, flexible grouping, how to use literature to assist multicultural understanding, the benefits of using school book clubs, and assessment.

**MCED 7317 Middle Level Literacy and Language Arts**
Provides a thorough examination of current middle level literacy issues, research, and practices in grades 4-8. Presents a global view of the school, community, teachers, administrators, and parents and the role of each in promoting literacy. Developmental, cognitive, and instructional variations common to this age group, integration of curriculum through interdisciplinary units, language arts in the content areas, phonics and word studies, children’s literature, flexible grouping, and literacy assessment.

**MCED 7318 Classroom Management for the Middle Level Teacher**
This course covers fundamental principles underlying middle childhood developmental programs in grades 4-8. It includes creating and fostering classroom management techniques. It also includes strategies for the design of environments which provide a safe place for teaching and learning. Connecting the community to the school for effective discipline and parental support and involvement is included.

**MCED 7319 Internship**
In this course, candidates will be placed in an active teaching role in a local school. Candidates will plan, teach, and reflect on the experience. Candidates will be responsible for all aspects of the classroom environment including making accommodations for children with special needs. All of the school resources will be used, and competence in using technology is required.
MCED 7328 Science Education
Science Methods is designed to prepare graduate candidates with the specialized expertise, professional development, and communication skills to strengthen effectiveness as a middle school science teacher. The class will focus on the advanced knowledge, skills, and dispositions needed to practice current methods of inquiry-based instruction and learning. This instruction shall include the application of hands-on activities that focus on the use of manipulation and has an emphasis on integrating science within the curriculum. There will be a strong emphasis on the use of technology for curriculum development and lesson presentations. The student will use the content to develop those pedagogical techniques and activities that encourage and promote gains in science learning.

MCED 7330 Social Studies in the Middle School
An in-depth study in social studies education in the middle grades (4-8). Builds on the belief that students need to construct knowledge in their own minds in order for it to be meaningful to them. Emphasis is placed on the meaningful learning of social studies content, skills, and values, in order to promote democratic behavior in early adolescents. Presentation of the theory and research explaining meaningful learning in social studies, the structure of knowledge to be learned, and strategies for effective and powerful social studies teaching. Candidates plan a developmentally appropriate hands-on experience with appropriate material and supportive environment necessary for children’s meaningful exploration and discovery.

MCED 7350 Seminar in Middle Education
Prerequisite: 24 graduate hours. Variable content based on current issues, effective practices in middle level education of interest to in-service teachers.

MCOM – Mass Communication

MCOM 5350 Design and Production
Prerequisite: junior status and MCOM 2320 or consent of instructor based on demonstrable professional experience. Decision-making in the editing process. Principles of typography and design for print and online media.

MCOM 5352 News Media and the First Amendment
Prerequisites: junior standing; MCOM 3360 recommended prerequisite. The restrictions, obligations, and responsibilities of the news media; the law and its effect on publishing and broadcasting; relations between the law and freedoms protected by the U.S. Constitution.

MCOM 5357 Seminar in Radio-Television Journalism
Broadcast news policies; history; governmental, other forms of regulation; social implications; influence of various publics on radio-television news coverage.

MCOM 5358 Reporting of Public Affairs
Prerequisites: MCOM 2320, 2350, and 3320; MCOM 3315 and 3360 may be taken as
prerequisites or corequisites; or consent of instructor based upon demonstrable advanced media experience. Practice in gathering materials and writing in-depth stories on public affairs; emphasis on courts, police, government, education, ecology, the economy, and social issues.

**MCOM 5359 Feature and Magazine Writing**
Prerequisites: MCOM 2320 and 2350. Planning, researching, and writing the feature article for newspapers, magazines, and online publications. Emphasis on humanistic reporting and providing a context for the news through thorough research and application of this research to the article. Materials submitted as assignments are subject to publication.

**MCOM 5375 Journalistic Freedom and Responsibility**
Journalistic ethics and practices; professional conduct, responsibilities of the journalist in a free society.

**MCOM 5380 Public Relations Writing**
Prerequisites: MCOM 2320 and 2350; MCOM 2350 may be corequisite. The journalistic function in public relations, includes the writing and processing of news and feature releases for print and electronic media and editing internal and external publications.

**MCOM 5381 Public Relations Cases**
Three credits. Study of recent public relations cases involving business, industry, institutions and government. Students will also be introduced to public relations theories as they are applied in case studies and will analyze cases in terms of their component parts.

**MCOM 5384 Topics in Mass Communication**
Prerequisite: junior standing and consent of instructor. Advanced and specialized topics in mass communication, especially those of current interest and relevance to mass communication professionals. Possible subjects include the following: journalism, entertainment, production and design, Web and media, strategic communication, mass media, etc. Classes will provide an in-depth understanding of topics chosen. Refer to the semester schedule for specific topics offered.

**MCOM 5386 Images of Minorities in the Media**
This course examines the material and ideological representations of various racial and ethnic groups in the United States as reflected in the media including both historical and contemporary depictions. Students explore theories including racial formation, otherness, and commodification among others. In this course, students learn the origins of ideological and material representations of minorities; how they are maintained in the culture and in the media; the similarities and differences in depictions among and across racial and ethnic groups; and the impact of these representations on the various minority groups and society as a whole.

**MCOM 7180, 7280, 7380 Special Problems in Mass Communication**
Prerequisite: consent of a graduate faculty member. Individual work on selected problems in mass communication.
**MCOM 7190, 7290, 7390 Readings in Mass Communication**
Prerequisite: consent of a graduate faculty member. Individual readings of selected works in mass communication.

**MCOM 7300 Proseminar in Mass Communication**
Introduces graduate students to Mass Communication graduate program content and faculty expectations; to IRB certification; to social-science research techniques and interpretation; to scholarly manuscript process and presentation; and to post-MA career possibilities, both professional and academic.

**MCOM 7305 Mass Communication Processes and Effects**
Structure, theory, processes, effects of mass communication, mass media in the U.S.; relationships of media to one another, to other major institutions in U.S. society, to individuals and groups.

**MCOM 7310 Precision Journalism**
Application of behavioral science methodology to news reporting, especially to reporting of governmental, public affairs.

**MCOM 7315 International Mass Communication**
Comparison, contrast of mass media around the world; interaction between media and governments; role of media in the development of nations; international communication theories, models.

**MCOM 7316 Ethnic and Alternative Media in America**
This course examines the role and function of ethnic and alternative news organizations in America from historical to contemporary times. Students will consider how ethnic and alternative news organizations and outlets have changed and contributed to society, as well as obstacles facing these organizations. Students will explore similarities and differences between mainstream news organizations and alternative media outlets.

**MCOM 7320 Literature of Journalism**
Review and assessment of writings, primarily books, concerning various aspects of journalism to provide a familiarization with and understanding of the body of literature pertaining to the discipline.

**MCOM 7325 The Press and Propaganda**
Interaction between press and institutionalized propaganda; theory, practice of persuasive campaigns created and implemented by political, religious, commercial institutions; strategy and media use for creating public opinions and issues, candidates, products, policies.

**MCOM 7330 Seminar in Mass Communication Law**
Prerequisite: MCOM 4352/5352 or equivalent. Pinpoints research procedures and provides incentive, direction, and a forum for examining topics in mass communication law; treats specific
problems by examining statutory confines and court interpretations.

MCOM 7331 Internet Policy and Regulation
This course is an overview of the policies and regulation that govern the Internet as a mass medium. It focuses on areas of active discussions among mass media practitioners, legislators, policy makers, the law courts, scholars and the American people.

MCOM 7335 Seminar in Journalism Quantitative Research
Prerequisite: MCOM 7310 or equivalent. Methodological approaches to the study of mass communication structure, processes, effects; emphasis on survey and experimental research procedures and content analysis.

MCOM 7337 Media Criticism
This course adopts a qualitative methodological approach to research in the framework of humanities, popular arts, critical theory, and cultural studies. It examines the social, cultural, and informational dimensions of mass media – the structures of mass media industries, and the mass media industries as culture industries.

MCOM 7340 Seminar in Journalism History
Historiography as applied in the field of journalism history; analysis of and practice in the scholarly writing of journalism history; selected topics in journalism history.

MCOM 7350 PR for 21st Century Non-Profits
Three credits. Study of public relations strategic media planning with special emphasis on the application of public relations principles as they apply to non-profit organizations. Includes student project.

MCOM 7360 Editorial Writing
Media’s comment function, policies, problems.

MCOM 7365 New Media Writing and Producing
Students in this course will learn how to use various multimedia tools to write and produce journalistic content for various online media venues.

MCOM 7370 New Media Publishing
This course involves learning how to design and publish multimedia mass communication content on the Internet. It is a lecture, lab and project based course that focuses on the principles of convergent journalism and the processes of responsive design and publishing mass media content on the Internet.

MCOM 7398 Professional Project
Under the direction of their supervisory committees students will use this course to complete professional-quality mass communication projects that integrate and synthesize their graduate experiences in the Professional Journalism/Public Relations Option. These projects will
demonstrate the student’s mastery of the discipline and provide the framework for future work in the field.

**MCOM 8100, 8200, 8300, 8400, 8500, 8600 Thesis**
Prerequisite: successful completion of comprehensive examination. A scholarly work, based on research that advances an original point of view in the discipline of journalism. Variable credit of one to six hours.

**MGMT – Management**

**MGMT 5310 Network Technologies Local**
MBA or MS in MIS Elective. A study of the role of telecommunications in information resource management, with emphasis on business applications in a network environment. Principles of network and installation, system component selection, administration, security, and control. This course is not open to students with credit for MGMT 4310.

**MGMT 5350 Business Database Management Systems**
MBA Elective, MS in MIS prerequisite course. Does not apply toward MS in MIS Core requirements. Addresses the concepts and principles underlying the design and application of relational graphics based data modeling, relational algebra, the database language SQL, database design, and normalization theory. Projects, which typically are implemented using a current commercial database management system software, are assigned to reinforce most of the concepts taught in the course. This course is not open to students with credit for MGMT 4350.

**MGMT 5365 Business Consulting**
MBA or MS in MIS Elective. Prerequisites: MGMT 5361 or consent of instructor. Teams of students consult with local small businesses recommended by the Small Business Development Center. Students work on problems in accounting, production, marketing, personnel, finance, insurance, law, and information systems. Student teams write reports outlining the problems and recommended solutions. This course is not open to students with credit for MGMT 4365.

**MGMT 5375 Sustainable Business**
A cross-disciplinary course to introduce students to the emerging field of sustainability and its triple-bottom line focus on the social, environmental, and economic impacts of business. Dual-listed in the *UALR Undergraduate Catalog* as MGMT 4375. Three credit hours.

**MGMT 5383 Issues in Entrepreneurship**
MBA or MS in MIS Elective. A significant exposure to the entrepreneurial process. Interaction with real-world entrepreneurs will enhance the entrepreneurial decision-making abilities of the students. This course is not open to students with credit for MGMT 4383.

**MGMT 7101 Developing Leadership Skills I**
MBA Core Course. Review of key managerial skills which include ethical decision-making,
teamwork, oral presentations, influencing others, and critical thinking. The course conceptually introduces the skills and familiarizes participants with measures to be used in evaluating the development of skills throughout the MBA. Sporadic practice opportunities will be utilized to enhance understanding of skills and to assess the degree of skill development at the front end of the MBA. Results of assessments will be instrumental in designing action plans for skills development and in establishing a baseline to compare future assessments.

MGMT 7102 Developing Leadership Skills II
Prerequisite: MGMT 7101. Practice and development of key managerial skills, which include ethical decision-making, teamwork, oral presentation, influencing others, and critical thinking. This course emphasizes learning by experience; students will have opportunities to apply the skills in a variety of MBA courses. Feedback from a variety of sources (i.e., peers, instructors, self) will follow each practice opportunity. Students will be asked to reflect on feedback, design plans of actions that tackle performance deficiencies, and demonstrate quantifiable evidence of skill improvement in subsequent applications.

MGMT 7180 Strategy for Competitive Advantage I
Prerequisite concurrent: MGMT 7101. An introductory course that holistically integrates business disciplines in ways that promote analysis and decision making. The interdependent roles of all disciplines in the MBA program are examined, relative to analyzing business situations.

MGMT 7210 Operations and Supply Chain Management
Prerequisite: ECON 7200. This course addresses important concepts and issues related to the design and management of business operations including manufacturing, distribution, logistics, transportation, supply chain, and service operations. Frameworks for designing, managing, and analyzing the supply chain operations needed to support a firm’s business strategy are introduced. The course links strategic and operational supply chain decisions for the student, forming a holistic view of business operations and the application of quantitative methods to address operational and supply chain issues.

MGMT 7250 Strategic Mgmt of IS & Tech
Prerequisite: ACCT 7304, ECON 7313 and MGMT 7180. Focus on strategic and operational roles of information systems and technology (IS) and other information resources, including their applications, value-adding processes, sourcing, governance, organizational and strategic alignment as well as limitations. Management of the IS asset portfolio using a risk/reward framework considering life cycle, obsolescence, innovation, and strategic impact.

MGMT 7280 Strategy for Competitive Advantage II
Prerequisite: MGMT 7180, MGMT 7210, MKTG 7311, FINC 7311 (prerequisite concurrent) and enrollment in last semester or progression to the last nine MBA program hours. This course develops a process for deriving business strategies, with emphasis on strategic concepts, techniques, and application to business planning and implementation to achieve competitive advantage.
MGMT 7302 Management and Organizational Behavior
MBA and MS in MIS Foundation Course. A study of the theories of management and the behavioral sciences, which are directly related to understanding, predicting, and influencing human behavior in organizations.

MGMT 7303 Systems Development and Database Design
MS in MIS Foundation Core Course. The course is a survey of information system development. It will provide students with non-IS backgrounds with foundation knowledge and skills in information systems development. The course overviews the process of system development using SDLC (system development life cycles) with an emphasis on database development. Three credit hours.

MGMT 7304 Business Applications for Decision Making
An exploration of the integration of business application technologies and procedures, such as cloud computing, business intelligence, mobile applications, and security being leveraged by corporations.

MGMT 7305 Advanced Database Management Systems
MS in MIS Core Course or MBA Elective. Prerequisites: MGMT 4350/5350 or equivalent. Advanced concepts in database management, expanding from the relational data model to the multidimensional model, object-relational techniques, and web accessed data.

MGMT 7307 Systems Analysis and Design Methods
MS in MIS Core Course. MBA Elective. Prerequisite: MGMT 3307 or equivalent. Application of system analysis and design methodology with emphasis on Object-Oriented (OO) methodologies. Includes basic concepts, modeling techniques, and tools for systems analysis and design.

MGMT 7308 Advanced Business Communication
MS in MIS Core Course. MBA Elective. Analysis of communication issues in the global socio-technical environment. Assessment of organizational communication systems. Refinement of written and verbal communication competencies.

MGMT 7310 Management of Human Capital
MBA Core Course or MS in MIS Elective. Provides the foundations for managing people in organizations. It includes theories addressing the psychology of management (e.g., motivation, work attitudes) and a review of the human-resource processes (e.g., selection, training) that assist in maximizing human capital. Heavy emphasis is placed on the applied view of topics.

MGMT 7311 Entrepreneurship and Small Enterprise Management
MBA or MS in MIS Elective. Prerequisites: ACCT 7302, FINC 7310, MKTG 7300 or equivalent courses. Problems associated with entrepreneurship; emphasis on small enterprises, feasibility studies of new small enterprises.
**MGMT 7312 Team Development**  
MS in MIS Core Course or MBA Elective. Organizational theory and principles of developing and managing teams.

**MGMT 7313 Commercializing Innovations**  
Course Description: The students will work in teams to develop new products and formulate their pathway to market utilizing a business plan methodology. This course focuses upon innovation, multi-discipline integration, problem solving, and decision-making. The learning that occurs in this course is equally applicable in a startup venture as it is in a medium or large organization.

**MGMT 7315 E-Commerce Technologies**  
MBA or MS in MIS Elective. An overview of e-commerce technologies, including analysis of e-commerce infrastructure, technology, and managerial and implementation strategies. Focus on web development.

**MGMT 7335 International Management**  
MBA or MS in MIS Elective. Introduction to international business; particular issues and problems associated with managing business operations in multinational enterprises; management responses to these problems.

**MGMT 7340 Collective Bargaining**  
MBA or MS in MIS Elective. Aspects of labor-management relations; includes union organization, legal parameters, agreement negotiation, day-to-day administration of union-management agreement; emphasis on roles of industrial relations managers, line managers; extensive use of case studies.

**MGMT 7341 Human Resource Management and Industrial Relations**  
MBA or MS in MIS Elective. Selected topics in personnel administration; emphasis on topics of current importance that meet specific student needs; individual and group research project using primary and secondary sources; readings, case studies, discussions with guest speakers from national, regional, local enterprises in the metropolitan Little Rock area.

**MGMT 7345 Employment Law for Managers**  
This course examines the laws that regulate the employment relationship with an emphasis on helping managers comply with this law. Topics include employment discrimination (age, religion, color, gender, national origin, race, disability), pre-employment inquiries and testing, seniority and promotions, affirmative action, sexual harassment, equal pay requirements, overtime and minimum wage rules, employee dismissal issues, worker safety and health, gay and lesbian work issues, employee privacy, time-off requirements, employment lawsuits, union issues, and whether someone is an employee or independent contractor. Legal cases are used extensively to increase student comprehension.
**MGMT 7350 Information Systems Management**
MBA and MS in MIS Core Course. The strategic perspective for aligning competitive strategy, core competencies, and information systems. Development, implementation, and management of information systems that support the operational, administrative, and strategic needs of the organization, its business units, and individual employees.

**MGMT 7351 Management Information Systems: Theory and Application**
MBA or MS in MIS Elective. Information flow between various decision points in functional areas of a variety of organizations; develops understanding of routine information flow, how it can be made more effective and efficient in terms of handling, processing, refining, dissemination; uses executive and systems design perspectives; reviews and uses real systems in local government and business organizations.

**MGMT 7352 Emerging Technologies and Strategic Issues**
MS in MIS Core Course. MBA Elective. Prerequisite: MGMT 7350 or equivalent. In-depth examination of the strategic use and development of an integrated technical architecture (hardware, software, networks, and data) to serve organizational needs in a rapidly changing competitive and technological environment. Strategic use of technologies for intra- and inter-organizational systems.

**MGMT 7353 Project Management**
MS in MIS Core Course. Capstone course to be taken at the end of the program. Prerequisites: MGMT 7304, 7305, 7308, 7312, 7350, and completion of or concurrent enrollment in ACCT 7330. A study and application of project management techniques through the development and implementation of an application development project. Includes all stages of the project development life cycle, with focus on enterprise application integration.

**MGMT 7370 Issues in Manufacturing and Operations Management**
MBA or MS in MIS Elective. Prerequisite: All Core courses. Concerns of manufacturing, service management; includes product and process design, plant capacity and location, work force development, scheduling, inventory control, product and service improvement, vendor relations; emphasis on resource and functional integration, information systems use, team solutions, global marketplace competition strategies; decision-making tools such as forecasting, queuing theory, simulation, network analysis.

**MGMT 7371 Production/Operations Management**
MBA or MS in MIS Elective. Prerequisite: ECON 7320 or ECON 7313, or equivalent. A study of traditional ideas and techniques of production/operations management as well as contemporary practices and concepts being employed by businesses. In this course, the term "production" refers to the conversion of labor hours, dollars, materials, and skills (inputs) into products or services.

**MGMT 7380 Corporate Strategy**
MBA Core Course. Capstone course to be taken at the end of the program. Prerequisites: FINC
7311, and enrollment in last semester or in last nine program hours. Process for deriving
corporate, business strategies; emphasis on strategy concepts, techniques, application to small,
large private sector corporations, nonprofit organizations.

**MGMT 7398 Seminar in Current Topics**
MBA or MS in MIS Elective. Prerequisite: Consent of instructor. Topics of current importance,
interest in management.

**MGMT 7399 Independent Study**
MBA or MS in MIS Elective. Prerequisites: All Foundation courses, 12 credits of Core
requirements, and consent of instructor. Intensive research under faculty supervision on
approved topic in area not covered in depth through regularly scheduled courses; research paper
required.

**MGMT 8100 Information Systems Technology**
Only open to Executive MBA students. Design of end-user applications and their role in
managerial/business decision making; familiarization with the basic productivity software
packages and the use of Internet resources in business.

**MGMT 8107 Leadership Foundations**
Only open to Executive MBA students. Defines leadership, maps leadership style for the
individual, and explains its role in management. It focuses on concepts for developing strategic
leadership within the organization, experience and skills for leading organization development
and change, team interaction, and styles. It draws on writing, exercises, and students’ business
experience to explore the foundations and techniques of organizational leadership.

**MGMT 8108 Strategic Applied Leadership**
Only open to Executive MBA students. This course builds upon MGMT 8107, Leadership
Fundamentals, adding the concepts of power, self-leadership, strategic leadership,
communication, and compensation, in an application-based format. Students learn the role
leadership in gaining competitive advantage, through the analysis, formulation, and
implementation of a strategic plan. In addition, leadership is stressed, in regard to establishing
measure, communicating results, and compensating individuals within the organization.

**MGMT 8270 Operations Management**
Only open to Executive MBA students. Prerequisites: Economics 8320. Addresses topics that have
applications both in manufacturing and in services, including quality control methods, forecasting
techniques, scheduling and planning, the transportation problem, and project management
(PERT/CPM). Computer assignments may be given.

**MGMT 8310 Applied Organizational Behavior**
Only open to Executive MBA students. Organizational behavior concepts and applications, such as
leadership, motivation, perception, conflict, and communication will be included. Emphasis will be placed on learning the traditional areas of organizational behavior using an experiential learning approach.

**MGMT 8341 Human Resource Management**
Only open to Executive MBA students. Contribution of the human resource management function in achievement of organizational objectives. Role of upper and middle management in the establishment and implementation of human resource strategies and policies. Topics of discussion: employee selection, performance evaluation, termination, compensation and benefits, reward systems, counseling, negotiation, and personnel/labor law.

**MGMT 8380 Strategic Management**
Only open to Executive MBA students. Prerequisites: FINC 8311, and enrollment in last nine program hours. Integrates the functional areas of business and develops a top management perspective; emphasis on developing executive abilities and creative thinking via practice in formulating value statements, visions, missions, objectives, strategies, policies, and alternative courses of action.

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### MKTG – Marketing

**MKTG 7301 Marketing Analysis, Planning, and Control**
MBA and MS in MIS Foundation Course. Prerequisite: graduate standing. Marketing principles, structure, framework from managerial perspective; role of basic marketing functions (price, product, distribution, promotion) in determination and implementation of strategy and other marketing decision-making activities; significance of legal and ethical precepts; increasing role of global marketing activities.

**MKTG 7311 Marketing for Profit and Growth**
Prerequisite: ECON 7313 and ACCT 7304. MBA Core Course or MS-MIS Elective. Proper evaluation of the actors and environmental forces within markets to formulate and execute effective local and global marketing strategies including business models, segmentation, target marketing, positioning, differentiation, branding, the marketing mix or 4 p's (price, product, place, promotion), integrated marketing communications, product management, and new product development. Course also includes the use of marketing metrics, development of marketing plans, and anticipating the effect of the business cycle on marketing efforts.

**MKTG 7312 Markets Analysis**
MBA or MS in MIS Elective. Prerequisite: ECON 7200. Prerequisite concurrent: MKTG 7311. Analysis of consumer and intermediate markets for purposes of developing marketing strategy; includes income and expenditure patterns, buying decision processes, buyer behaviors, and consumption patterns.

**MKTG 7313 Marketing Research and Information Systems**
MBA or MS in MIS Elective. Prerequisite: ECON 7200. Prerequisite concurrent: MKTG 7311. Research methods, application to marketing decision-making; includes problem definition, research design, sampling, data collection and analysis, research presentation.

**MKTG 7314 Product Innovation**
MBA or MS in MIS Elective. Prerequisite concurrent: MKTG 7311. Relationship between marketing, innovation, communications; builds on behavioral base for insights to product innovation, marketing communication process; behavioral, communication concepts for developing marketing communications programs.

**MKTG 7316 Global Marketing**
MBA or MS in MIS Elective. Prerequisite: All Core courses. Primary dimensions of the global marketing environment; introduction to international marketing research problems and approaches; planning for global marketing operations and managing the global marketing mix.

**MKTG 7320 E-Commerce: Strategic Issues**

**MKTG 7330 Services Marketing**
MBA or MIS Elective. Examines the major differences between goods and services, as well as the problems associated with the differences. Strategic aspects of services marketing mix are discussed with emphasis on the delivery of high quality services and the management of service employees. The course is conducted in a seminar style and makes use of the case study method. Not open to students with credit for MKTG 4330 or MKTG 5330.

**MKTG 7381 Law and Ethics in Business**
MBA and MS in MIS elective. This course instructs the student in the foundations of law that constitute the framework for doing business in the United States. Specific fields of concentration include: constitutional principles, contract formation and remedies, tort and product liability property, environmental regulation, securities regulation, and government mandates. All topics will be explored with a focus on ethics together with an analysis of the social and political issues that influence the workplace.

**MKTG 7399 Independent Study**
MBA or MS in MIS Elective. Prerequisites: All Foundation Courses, 12 credits of Core Courses, and consent of instructor. Intensive research under faculty supervision on an approved topic in an area not covered in depth through regularly scheduled courses; research paper required.

**MKTG 8300 Seminar in Current Topics**
MBA or MS in MIS Elective. Prerequisites: Consent of instructor. Topics of current importance, interest in marketing.
MKTG 8301 Marketing Management
Only open to Executive MBA students. The course has two major objectives for the student: (1) understanding basic marketing concepts involving buyer behavior, product planning, pricing, channels of distribution and promotion, and (2) developing marketing decision making capabilities based on strategic management and analytical skills. The overall objective is to integrate all the functional aspects of marketing with other functional areas of the firm and with the environment, particularly consumption markets, competitions, the economy, legal and regulatory environment, and social evolution.

MKTG 8311 Marketing Strategy
Only open to Executive MBA students. Prerequisites: MKTG 8301. This course is offered as the second course in a sequence, following the principles of MKTG 8301. The course is designed to enhance the student’s ability to formulate and implement a marketing plan, and to better understand the relationship of marketing to other business functions. It will emphasize application of marketing concepts through the use of cases, simulations, or projects.

MUAP – Applied Music

MUAP 7214 Advanced Functional Piano
Prerequisites: graduate standing, pass piano functional exam. Intensive review of functional skills; development of harmonization skills, accompanying, transposition; uses common practice period, 20th-century elements.

MUAP 7325 Advanced Choral Conducting
Prerequisites: undergraduate basic and choral conducting courses or consent of instructor. Techniques required in performing major choral works of selected musical periods, specific composers, different genres of choral form from inception to present.

MUED – Music Education

MUED 5192, 5292, 5392 Special Studies
Prerequisites: graduate standing, consent of instructor. Concentration on a specific area of music or music education. Offered on demand.

MUED 5252 Perspectives on Careers in Music
Prerequisite: must have passed the upper-level qualifying jury in MUPR, as well as MUTH 2391 and MUTH 2292, or consent of instructor. Course objective is to broaden the student’s understanding of the range of careers in the world of professional music. The course will explore music as both a creative endeavor and as a product. Students will learn how music progresses from artistic creation to consumable product, and how the participants in the music business make a living utilizing skills in marketing, performance, teaching, recording, technology, venue management, etc. MUED 5252 is not open to students with credit for 4252. Two credit hours.
**MUED 7112 Vocal Pedagogy**
Methods, materials for teaching voice in private studio, institution; application of fundamental vocal techniques to public school choir; practical application of techniques through observation of demonstrations, supervised teaching.

**MUED 7322 Advanced Elementary Music Education**
Prerequisite: MUED 3322, 3332, or equivalent. Current principles, practices in elementary school music; most recent methods and materials, their applications to different school systems.

**MUED 7332 Fine Arts Concept**
Prerequisites: graduate standing, BA in music or art. Teaching fine arts survey courses in public schools; elements, genres of visual arts, music, theater, dance, films; interrelated changing art styles in context of culture, cultural history; language, criteria for artistic criticism.

**MUED 7333 Fine Arts Pedagogy**
Prerequisites: MUED 7332; Instructional Resources in Education 4301 or 7302. Skills for planning, teaching survey of fine arts curricula.

**MUED 7382 Concepts of Music**
Prerequisites: graduate standing, consent of instructor. Acoustical, psychological aspects of music; emphasis on problems of perception, experimental aesthetics, musical function, measurement and diagnosis of music ability; related literature of experimental investigation.

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**MUPR – Private Music**

**MUPR 7100, 7200 Applied Music-Private Instruction**
Prerequisite: graduate-level proficiency demonstrated through audition before music faculty. Jury examinations required at the end of each semester. One hour of credit for a half-hour lesson each week; two hours of credit for an hour lesson each week. Consult the department for guidance in registering for any of these areas: baritone, flute trumpet, bassoon, French horn, tuba, cello, oboe, viola, clarinet, organ, violin, euphonium, piano, and voice.

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**MUTH – Music Theory**

**MUTH 7370 Advanced Analysis**
Prerequisite: MUSC 1211, 1310, 1510, 1520, 2510, or equivalent. Common practice period in western music; 20th-century techniques; summary of topics such as voice leading, doubling, chord-choice criteria, variety of techniques for analysis; integration of topics covered at undergraduate level; introduction of aesthetics, theory pedagogy using computer.
PADM – Public Administration

**PADM 5341 Seminar in Comparative Public Administration (Elective)**

Similarities, differences in bureaucratic structures, processes; analysis of organization, staffing, role of administrative systems in contrasting social, cultural contexts of the western, nonwestern worlds.

**PADM 5353 Seminar in Public Budgeting (Elective)**

Budgeting theory, practice; includes budgeting as allocations, process, games, rituals, history, politics; institutions, their roles in budgeting; current issues such as uncontrollability, balanced budgets, variance budgeting.

**PADM 7130/ PADM 7230/ PADM 7330 Independent Study in Public Administration (Elective)**

The independent study is given under the direction of a faculty member; course credit can vary from 1 to 3 credit hours depending on the workload requirements. Students take such courses to engage in specific topic of interest (which is usually not available through regular offerings), or participate in research projects for governments and non-profit agencies. A final written report is required. No more than six hours may count as electives toward degree.

**PADM 7301 The Profession of Public Administration (Required)**

Introduction to the discipline of public administration covers historical development of public administration, the relationship between politics and administration, conflicting public values, defining the public interest and the appropriate level of administrative discretion, as well as professionalism, the ASPA Code of Ethics, career planning for public service, and major sources of information for professional research. Students should enroll in The Profession of Public Administration course in the first semester they are in the MPA program.

**PADM 7303 Public Organization Theory (Required)**

Theory, research of complex organizations, their management, administration; relevance, application of the approaches in terms of design, structure, function, processes, their interdependencies.

**PADM 7313 Human Resource Management in the Public Sector**

Policies, practices, issues of managing the human resource function in public organizations.

**PADM 7315 Methods in Public Administration (Required)**
Gathering, analyzing data; includes research design, measurement, sampling, survey and evaluation research, coding, scale and index measurement, univariate, bivariate, and multivariate analysis. Students must complete the Methods of Public Administration course with a minimum grade of C before being able to enroll in 7363 Public Policy Analysis.

**PADM 7323 Public Financial Administration (Required)**

Policies, concepts, practice, and analysis of public financial management issues and practices; introduction to the principles of public finance and the skills necessary for sound management of public sector financial resources. These principles include public budgeting, debt, investments, forecasting, tax administration, and intergovernmental fiscal transfers.

**PADM 7324 Financial Management for Nonprofit Organizations (Elective)**

This course is designed to provide students with an understanding of funding mechanisms, accounting, and federal reporting requirements for nonprofit organizations. Topics focus on nonprofit accounting, financial resource acquisition, budgeting, financial management, control and transparency in nonprofit organizations.

**PADM 7326 Public and Organizational Networks for Nonprofits (Elective)**

This course will discuss how nonprofit organizations can cultivate and strategically utilize relationships with government agencies, corporations, volunteer networks, and the general public. Both traditional outreach approaches and new formats, including electronic and social media, will be covered.

**PADM 7331 Problems in Public Administration (Elective)**

Seminar on selected topics.

**PADM 7332 Politics and Bureaucracy (Required)**

Relationship of politics and administration; reference to the influence of legislative bodies, parties, interest groups, other forces on bureaucracy, formation and execution of public policy.

**PADM 7333 Administrative Leadership and Public Management (Elective)**

Theory, practice; distinctive challenges facing managers of public organizations; includes political context, effective leadership styles, building and maintaining motivated organizations, application of successful management techniques.

**PADM 7334 Grant Writing and Fundraising (Elective)**

Practical, hands-on study of the concepts, strategies, and techniques of resource development in public and not-for-profit organizations; emphasis on formulation of needs and capacity studies, organization of goals and objectives, budget preparation, volunteer coordination, and outcomes evaluation.
**PADM 7335 Urban Management (Elective)**

Administration of urban governments in context of intergovernmental relations, limited resources, political compromise, competing citizen demands; emphasis on balancing economy and efficiency with equity concerns, especially in key policy decisions relating to quality of urban life.

**PADM 7336 Managing the Not-for-Profit Sector (Elective)**

Management issues unique to nonprofit sector; hands-on use of real-world examples, problems through selected readings, special projects; attention to managing volunteers, fundraising.

**PADM 7337 Public Organizational Change and Development (Elective)**

Theories, concepts; emphasis on applications to practical administrative problems.

**PADM 7338 Public Personnel Problems and Issues (Elective)**

Topical problems, issues from operational, theoretical perspectives; emphasis on political, legal, economic, social, environmental forces that shape the human resource function in public agencies.

**PADM 7339 State Administration and Reform (Elective)**

Specialized needs of managing, reforming state government from comparative framework; emphasis on Arkansas.

**PADM 7340 Ethics in Public Administration (Elective)**

Public managers today face increasingly complex ethical dilemmas, often having to weigh personal and professional values against current public opinion and the law. This course examines some of these inherent conflicts through the use of case studies to help provide a framework and process for resolving ethical issues in the public sector.

**PADM 7341 Managing Public Disputes (Elective)**

Prerequisites: Consent of instructor. Covers the knowledge and skills necessary for effective management of complex multi-party disputes about public issues such as land use and delivery of services. Examination of principles for managing conflict in the public sector; explores effective methods for analyzing and framing multi-party conflicts; and provides step-by-step procedures for reaching and implementing agreements.

**PADM 7342 Public Revenue Management (Elective)**

This course is a practical study of concepts and techniques used to manage public funds from a public manager’s perspective. Reading material, class discussions, and practical exercises will
emphasize public funds accounting, internal revenue control, investing, and financial statements.

**PADM 7343 Organizational Partnerships and Collaboration (Elective)**
Increasingly, managers, employees, and volunteers from all walks of life, in the public, nonprofit, private sectors are called upon to work in collaborative environment. Reading material, class discussions, and practical exercises will focus on how public and nonprofit managers can best facilitate production and change in such an environment.

**PADM 7345 Urban Management and Community Change (Elective)**
Project-driven study of urban government leadership and management in the context of community systems and collaboration. Focus on issues of regional cooperation, planning and service delivery, urban and suburban governments, and neighborhood and community development.

**PADM 7353 Seminar in Intergovernmental Management (Elective)**
Selected aspects, such as relations between levels of government, American federalism, federal fiscal relations, comparative administration, and emerging trends in intergovernmental relations.

**PADM 7363 Public Policy Analysis (Required)**
Prerequisite: PADM 7315. Public policy evaluation with an emphasis on developing future policies using quantitative, qualitative techniques; includes research design, computer applications, evaluation research, and substantive policy.

**PADM 7373 Seminar in Public Administration (Required)**
Prerequisite: 30 hours approved coursework toward MPA degree with a minimum of 18 hours of core courses completed and a 3.0 GPA for these approved MPA courses. Analysis, linkage of theories, concepts in public administration, policy; emphasis on applying research to practice of public administration.

**PADM 7380 Public Program Evaluation (Elective)**
Prerequisite: Consent of instructor. Techniques for evaluating how well public programs work and what sort of research is most helpful to managers who want to improve them; formal research design, process evaluations, and impact evaluations; final project requires the evaluation of public or non-profit program.

**PADM 7385 Seminar in Public Policy (Elective)**
Public sector theories; techniques for analyzing policies; various substantive fields that may include health, energy, environment, other policy-making areas.

**PADM 7393 Administrative Law (Elective)**
Legal aspects of the administrative process, effect of legal principles, processes on administrative decision making; emphasis on limitation of administrative discretion, judicial review of
Graduate Courses - 2015-2016 Graduate Catalog

administrative decisions.

**PADM 8000 Thesis in Public Administration (Elective)**
Prerequisites: 24 graduate hours; consent of coordinator. Preparation of a thesis demonstrating scholarship on some aspect of public administration, normally in-depth treatment of an applied management concern; must be approved by a thesis committee (chairperson and two faculty members selected by student with coordinator’s approval). Variable credit of one to six hours. Concurrent enrollment in final three to six hours with coordinator’s approval.

**PADM 8301 Internship I in Public Administration (Optional)**
Prerequisites: 30 graduate hours; consent of coordinator. (For students with no public service background.) Practical, first-hand experience in government or nonprofit sector; usually requires four to six months full-time work in appropriate position, management paper reflecting professional and scholarly development.

**PADM 8302 Internship II in Public Administration (Optional)**
Prerequisites: 30 graduate hours; consent of coordinator. (For students with no public service background.) Practical, first-hand experience in government or nonprofit sector; usually requires four to six months full-time work in appropriate position, management paper reflecting professional and scholarly development.

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**PHIL – Philosophy**

**PHIL 5280, 5380 Topics in Philosophy**
Prerequisite: graduate standing, consent of instructor. In-depth study of selected major problems in philosophy or the works of individual philosophers or groups of philosophers. Content changes on demand. For descriptive title of the content, refer to the UALR Schedule of Classes.

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**PHYS – Physics**

**PHYS 5199, 5299, 5399, 5499 Special Topics**
Prerequisite: consent of instructor. Advanced, specialized topics of current interest in physics and astronomy. One, two, three, or four hours of lecture, or equivalent, per week.

**PHYS 5310 Statistical Thermodynamics**
Prerequisites: PHYS 2322, 3323. Microscopic, unified approach to thermodynamics, statistical mechanics with applications to ideal gases; includes blackbody radiation and conduction electronics, magnetic systems, the Debye model, chemical and phase equilibria. Three hours lecture, one hour optional discussion per week. Offered in spring on even years, or when in demand.
**PHYS 5311 Classical Mechanics**
Prerequisites: PHYS 2321, MATH 2306 or consent of instructor. Concepts of Newtonian mechanics, dynamics of particles and systems of particles, gravitation, vector analysis, dynamics of rigid bodies, moving coordinate systems, continuous media, small oscillations, and the methods of Lagrange and Hamilton. Three hours lecture, one hour optional discussion. Three credit hours.

**PHYS 5321 Electromagnetism I**
Prerequisite: PHYS 2322. Coulomb, Gauss laws; Poisson, Laplace equations and solutions in several coordinate systems; electric, magnetic energy; AC, DC circuits; Ampere’s, Faraday’s laws; vector potential; Maxwell’s equations; propagation of electromagnetic waves. Three hours lecture, one hour optional discussion per week. Offered in fall on even years.

**PHYS 5331 Modern Physics I**
More detailed treatment of topics in Physics 3323; relativity, quantum mechanics, statistical physics, atomic and nuclear physics, elementary particles. Three hours lecture, one hour optional discussion per week. Offered in spring on odd years.

**PHYS 5340 Solid State Physics**
Structure of crystals, dispersion relations, specific heat, phonons, electric and magnetic properties of insulators and metals, band theory of metals, insulators and semiconductors, superconductivity. Three hours lecture, one hour optional discussion. Three credit hours.

**PHYS 5350 Quantum Mechanics I**
This course covers the concepts and history of quantum mechanics, experimental basis, the uncertainty principle, the Schrodinger equation with applications to simple systems, the hydrogen atom, perturbation theory, and the symmetry principles. Material from the Consortium for Upper-level Physics Software (CUPS) is assigned to enable students to investigate quantum systems in a sophisticated way. Three hours lecture and one hour optional discussion per week.

**PHYS 5360 High Energy and Nuclear Physics**
Prerequisite: PHYS 3323. Properties of the nuclei, nuclear structure and stability, quark-gluon structure of hadrons, thermodynamics of large ensembles of hadrons, nuclear reactions, instrumentation, and accelerators. Three hours lecture, one hour optional discussion per week. Three credit hours.

**PHYS 5380 Wave Motion/Optics**
Prerequisite: PHYS 2322. Wave equation and solutions, wave propagation, coherence, interference, diffraction, polarization, refraction and reflection, dispersion, interactions of light with matter, Huygens’ principle, optical instruments, quantum optics. Three hours lecture, one hour optional discussion per week. Offered in spring on even years.

**PHYS 7199, 7299, 7399 Selected Topics**
Prerequisites: four undergraduate physics hours, professional experience in some physics area,
consent of instructor. Topics include modern physics, astronomy; assists professionals to remain current in these fields; laboratory emphasis on physics demonstrations, experiments, simple astronomical observations. One hour lecture or two hours laboratory per week for each semester credit hour.

**PHYS 7289, 7389, 7489 Graduate Research**
Prerequisite: consent of department chairperson. Scholarly research and individual investigation on a topic in physics or astronomy; student will analyze, plan, and conduct experimental or theoretical work on a research problem. The student will spend four to six hours per week for each hour of credit earned. The exact hourly commitment per week will depend on the nature of the project and will be agreed on in advance by the student and the instructor; a memorandum of understanding must be signed by the student, instructor, and chairperson.

**POLS – Political Science**

**POLS 5308 Topics in Urban Studies**
Cross-listed with URST 5308.

**POLS 5310 Seminar in American National Government**
Research seminar dealing with selected aspects of U.S. politics and government. It gives students the opportunity to bring analytical skills and substantive knowledge gained in prior courses to bear on a selected topic of importance, and involves a substantial writing project. Three credit hours.

**POLS 5320 American Foreign Policy**
Examines the goals and motivation of American foreign policy and relations, the actors and processes that shape policies and decisions, and selected foreign policy problems and issues. Three credit hours.

**POLS 5330 U.S.-Panamanian Relations: Decisions and Documents**
Prerequisites: graduate status; consent of the instructor is also required for on-line students. U.S.-Panamanian relations during the late 19th and 20th centuries, in the context of U.S.-hemispheric relations and U.S. to global power status. Through course modules on canal treaties and historic turning points, students master the background necessary to conduct their own research projects based on archival materials. The course will focus on benchmark decisions, which include responses to opportunities and crises in Panama, decisions to agree or refuse to negotiate canal treaties, and decisions about alternative control regimes for the Panama Canal. Major themes of the course include perceptions of national interests, adaptation to changing international realities, conflict resolution, and bargaining behavior during negotiations.

**POLS 5333 Seminar in State Politics**
Research on selected aspects of state politics such as comparative policy making, political culture variations, and problem solving. Three credit hours.
**POLS 5341 Seminar in International Relations**  
Special problems, issues, or trends in the study of international relations. May be repeated with a change of subject and permission of the department chairperson. Cross-listed as an undergraduate and graduate seminar.

**POLS 5343 Seminar in Local Politics**  
Research on selected aspects of local politics such as community power structure, local autonomy, and comparative administration. Three credit hours.

**POLS 5345 Clinton Presidency**  
This course explores the presidency of Bill Clinton from several perspectives, all grounded in the discipline of political science: the administration’s policy making; presidential power and leadership; crises and turning points in the Clinton administration; campaigning and communications skills of the president; the administration’s relations with the press, political parties and groups; and the legacy of the Clinton presidency.

**POLS 5348 Internship**  
This course is a public service learning experience that gives students the opportunity to blend practical concepts learned on the job with their academic course work in political science. Students attend periodic seminars and participate in a substantial writing assignment aimed at fully integrating and synthesizing their public service experience. Three credit hours.

**POLS 5356 Urban Policy and Government**  
Cross-listed with UYST 5356. Course explores urban policy-making and urban government from a critical, analytical urban studies perspective. Considers historical and modern variations of urban government and intergovernmental relations and how this relates to urban policy making, political will and quality of urban life issues.

**POLS 5370 Politics of the Middle East**  
The course covers the politics and political dynamics of the Middle East, introducing the student to the main issues and actors (state and non-state) of the contemporary Middle East. The course explores the nature of contemporary politics in the region including of the impact of the complex relationships among great power intervention, economics, ethnicity, nationalism, and religion.

**POLS 5376 Global Terrorism**  
The course will cover the history, contemporary nature and defense against terrorism, with a particular emphasis on the post 09/11 “war on terror.” Graduate students will conduct additional research and write a research paper on advanced topics in terrorism. Students who took the course at 4000 level cannot take it again at the 5000 level.

**POLS 5380 Classical Political Theory**  
Major political ideas and doctrines of political thinkers from Plato to Montesquieu, with emphasis on the contributions of each to the theory and practice of government. Three credit hours.
**POLS 5387 Great Decisions in American Foreign Policy**
A lecture and discussion course that examines eight current foreign policy issues. The course explores the origin of each issue, alternative proposals and strategies for American foreign policy, other nations’ proposals and strategies, and the consequences of past and current international problems for the United States and the world community. Three credit hours.

**POLS 5390 Modern Political Theory**
A continuation of POLS 5380. From Edmund Burke to the present, with emphasis on the more recent political theories and systems of democracy, communism, and socialism. Three credit hours.

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**PSYC – Psychology**

**PSYC 5300 Drugs and Behavior**
Effects of drug administration on ongoing behavior, learning; emphasis on drugs of clinical application, usage.

**PSYC 5310 Counseling Psychology**
Field of counseling, its philosophy; emphasis on counseling relationship; includes educational, vocational, industrial, personal counseling.

**PSYC 5311 Lifespan Development Psychology**
This course will use an Eriksonian stage theory to examine the developmental changes characteristic of adults in our society. State as an interaction between physical changes and social constructs will be stressed, and the problems of careers and mature relationships will be examined.

**PSYC 5325 Personnel Psychology**
Areas of industrial psychology generally concerned with personnel work; includes predictors, criteria, related issues; statistical analysis for selection, placement; testing; interviews, other non-test procedures; personnel development; attitude measurement.

**PSYC 5330 Learning and Memory**
Fundamental principles; includes parameters of reinforcement, secondary reinforcement motivation, extinction, discrimination, generalization.

**PSYC 5336 Cognitive Development**
An introduction to the theories and research on the development of thinking in infants, children, and adolescents.

**PSYC 5340 Shaping of Human Behavior**
Applying learning, conditioning principles to human behavior; includes behavior modification, operant conditioning, contingency management in shaping the behavior in a variety of real-life
settings (e.g., school, home, work, interpersonal relations); ethical issues involved in changing human behavior.

**PSYC 5345 History of Psychology**
This course presents an overview of the development of the contemporary science of psychology, connecting it with developments in intellectual history and the history of science. It explores the philosophical and physiological roots of psychology as well as the major questions regarding human nature that psychologists, along with other social scientists, have repeatedly addressed.

**PSYC 5365 Psychological Disorders of Childhood**

**PSYC 5385 Psychology and Public Health**
This course will consider how psychological science and applications can help shape community health and public health efforts. Issues related to health psychology research, community psychology, preventive health, and public health practice will be considered. The course will explore innovative public health models in which psychological science or applications have been prominent.

**PSYC 5460 Psychological Tests: Composition and Interpretation**
Reliability and validity, norms, standardization; composition, interpretation of frequently used intelligence, personality, vocational interest, other tests. Three hours lecture, two hours field research per week.

**PSYC 7230, 7330, 7430 Graduate Seminar in Psychology**
Readings in professional literature, extensive discussions under faculty guidance. Topic determined by student interest; may be repeated for credit with coordinator’s permission.

**PSYC 7320 Advanced General Psychology**
Overview of psychology sub-specialties; emphasis on critical analysis of theory, research to understand values, limitations of each approach. Various faculty members present lectures on special topics.
Directed readings, individual discussion with a faculty member. May be repeated for credit with coordinator’s permission.

**PSYC 7335 Industrial/Organizational Psychology**
Basic concepts: content-includes issues in personnel, testing, organizations, human factors, professional questions.

**READ – Reading**

**READ 7107, 7207, 7307 Special Topics in Literacy**
Special topics in literacy education including, but not limited to, in-depth study of phonemic awareness, phonics, fluency, vocabulary development and / or reading comprehension as they
Graduate Courses - 2015-2016 Graduate Catalog

RELATE TO HISTORICAL AND CURRENT PERSPECTIVES AT THE STATE AND NATIONAL LEVEL. OFFERED ON DEMAND.

**READ 7193, 7293, 7393 Special Topics in Reading Education**
Prerequisites: graduate standing, consent of instructor. Selected theoretical, research, and practical topics. These courses are used for state initiatives, such as Reading First, ELLA, McRatt, and Effective Literacy. May be repeated for credit. Offered on demand.

**READ 7306 Literacy and Technology**
Candidates will examine how to integrate new literacies, software, and technology across the curriculum. Candidates will study the strengths and limitations of technology and computer applications for the development and integration of effective technology lessons in a literacy curriculum across content areas.

**READ 7310 Literacy, Language, and Culture**
Candidates will explore how literacy learning takes place among diverse populations, including second language learners. Candidates explore the role of literature in promoting cross cultural understandings in a student-centered literacy curriculum. Specific topics include selecting literature and learning best practices to create a classroom that promotes social justice and critical literacy.

**READ 7321 Processes and Strategies in Reading Comprehension**
This course focuses on the processes of reading comprehension, including the influence of perceptions, beliefs, motivation, language, and strategies for understanding. An emphasis is placed on effective questioning, text selection, discourse chains, and environment as ways to promote comprehension.

**READ 7326 Developmental Reading**
Development of a comprehensive reading program; current practices in reading instruction and assessments; selection of effective materials, and meeting the needs of a diverse population.

**READ 7327 Contemporary Curriculum Design**
Philosophy, administration, and techniques of curriculum design, including participation in development of a culturally pluralistic curriculum.

**READ 7330 Children’s Literature Across the Curriculum**
This course is based upon current issues, research, and effective practices regarding the use of children’s literature across the curriculum. Students will learn how to select quality children’s books for use in a variety of content areas; develop respect and appreciation for numerous genres, multicultural literature, authors, illustrators, and poets; and plan lessons that use children’s literature to effectively support and enrich instruction in a variety of classroom settings.

**READ 7340 Best Practices in Literacy Instruction**
The course examines research-based practices in K-12 literacy instruction, including theories of
differentiated instruction, reciprocal processing, integrated curriculum, and linguistic diversity.

**READ 7342 Principles of Literacy and Cognition I**
Course restricted to Reading Recovery teachers-in-training. This course is the first of two courses of teacher training for the Reading Recovery program. It covers the theoretical foundations of a socio-psycholinguistic early intervention model appropriate to meet the needs of students having confusions with reading and writing conventions and includes on-going practical experiences in a school setting. Observation and specialized procedures are emphasized. The rationales and procedures of a short-term intervention program are discussed and practiced.

**READ 7343 Principles of Literacy and Cognition II**
Prerequisite: Principles of Literacy and Cognition I. Course restricted to Reading Recovery teachers-in-training. This course is the second of two courses of teacher training for the Reading Recovery Program. It covers the theoretical foundations of a socio-psycholinguistic early intervention model appropriate to meet the needs of students having confusions with reading and writing conventions and includes on-going practical experiences in a school setting. Observation and specialization procedures are emphasized. The rationales and procedures of a short-term intervention program are discussed and practiced.

**READ 7344 Intervention Designs for Struggling Learners**
A course involving supervised practice in intervention instruction for children experiencing difficulty in literacy. The class will focus on differentiating reading and writing instruction within various settings, including supplemental and classroom, for meeting the needs of struggling learners. The course will include techniques for using intervention team meetings to select appropriate services, collaborating with teachers across intervention programs, and using assessment to monitor children’s progress.

**READ 7345 Advanced Practicum in Intervention Models**
Prerequisites: READ 7344 or consent of the instructor. This course is an advanced study of intervention models for children experiencing difficulty in literacy. Candidates will implement a research-based intervention model in a school setting, collect data on the effectiveness of the model, and write a research paper.

**READ 7348 Teaching the Writing Process in Schools**
The course emphasizes the teaching of the writing process within a writing workshop format, including pre-writing, drafting, revising, editing, and publishing. Additional areas of study will include writing conferences, keeping a writer’s notebook, genre writing, evaluating writing, and other issues related to learning to write.

**READ 7350 Early Childhood Literacy Instruction and Assessment**
This course will focus on the foundations of literacy instruction at the primary level (Pre-K through grade 4). Emphasis will be given to learning to teach through the components of a balanced literacy program and the supporting theories and research. Special attention will be placed on designing and managing literate classroom environments, the importance of selecting
and using appropriate texts, developing students’ language and literacy skills, and using assessments to guide instruction.

**READ 7351 Foundations of Teaching Reading**  
Psychological dimensions of reading; principles of learning; organizational pattern affecting reading instruction; scope of the reading process; correlates of reading instruction; emphasis on appropriate use of various learning, psycho-linguistic theories in planning reading programs to meet children’s needs.

**READ 7352 Diagnosis of Reading Difficulties I**  
Prerequisite or Co-requisite: READ 7351. This course explores the causes of reading difficulties/disabilities, approaches to diagnosis, and appropriate remedial measures. Candidates analyze a variety of assessments, including formal and informal assessment instruments, administer and interpret assessments and make recommendations for appropriate instructional methodologies for specific students.

**READ 7353 Diagnosis of Reading Difficulties II.**  
Prerequisite READ 7352. This course builds on the knowledge and skills acquired in READ 7352. Students plan remediation strategies and programs based on diagnostic information gained from appropriately selected and administered assessments. Offered on demand.

**READ 7354 Teaching Reading in the Content Areas**  
This course focuses on exploring and using reading strategies to support the learning of content material.

**READ 7356 Practicum in Reading**  
Prerequisites: READ 7351, READ 7352. Candidates in this course will be involved in a clinical experience that supports the focus of their professional goals. Students will plan and implement an instructional program for students. The content of the class will include problem solving around the issues related to working in the clinical experience.

**READ 7357 Seminar in Reading**  
Prerequisites: a minimum of 15 hours in reading and consent of instructor. Current issues, influential researchers and theorists in literacy education, and effective practices. Course requires Internet and library searches and a research project. Offered in spring.

**READ 7361 Language and Reading Instruction in Early Childhood**  
Language development programs and reading methods, materials, teaching strategies for preschool and primary-age; relates speaking, listening, writing and reading to instructional strategies; planning administering comprehensive language readiness programs for preschool, primary age students. The course includes formal and informal evaluation techniques for young children; teaching emphasis on discovering children’s personal language competencies; multicultural emphasis on dialect and reading. Offered in spring and summer.
READ 7365 Specialized Assessment in Early Literacy Instruction
The course focuses on the principles of early intervention for diagnosing literacy problems for students, including an understanding of emergent literacy and the experiences that support it. Special attention will be placed on designing individualized and group instructional interventions targeted toward those students in greatest need or low proficiency levels, including knowledge of instructional implications of research in special education, psychology, and other fields that deal with the treatment of students with reading and learning difficulties.

READ 7370 Advanced Practicum in Reading
Prerequisites: READ 7352, READ 7356. This is a clinical course that requires a supervised experience in working with struggling literacy learners. Candidates in this course will work with individual students as well as small groups of students. Offered in summer.

READ 7395 Comprehensive Literacy Model for School Improvement
The course is designed as a summer literacy institute for teachers and school teams interested in implementing a comprehensive literacy model, including a framework for literacy, individual and small group interventions, literacy team meetings, assessment walls and progress, school plans, and literacy coaching. The course is a requirement for the Literacy Coach certificate program.

READ 7397 Creating Literate Environments
The course focuses on implementing a workshop approach in reading, writing, and content areas for meeting the needs of all students, including how to use reading strategies to access content knowledge. An emphasis is placed on organizing instruction to include a balance of whole group teaching, small group instruction, and individual conferences. Literacy components are discussed, including the rationale and procedures for implementing mini-lessons, guided reading, literature discussion groups, shared reading, small group assisted writing, and one-to-one conferences.

READ 7398 Theory and Practice in Literacy
This course examines literacy theories and their practical implications for instruction. Theories of knowledge acquisition, literacy processing, assisted performance, and transfer are examined and applied to reading and writing. Students conduct an action research project in a literacy-related area.

READ 8301 Supervision and Organization of Reading Programs
This course focuses on preparing reading specialists and literacy coaches for supervising and organizing a school-wide literacy program, including organizational techniques and instructional approaches. An additional focus is placed on developing the knowledge and skills of a literacy coach in three major areas: coaching teachers, providing professional development to school personnel, and evaluating a school’s literacy program.

READ 8302 Professional Experiences in Reading
The course focuses on practical experiences with a literacy program in a school. Requires a minimum of 10 clock hours a week in the appropriate practicum setting, attendance at scheduled seminars, and a portfolio that demonstrates competencies as a reading professional, including
conducting literacy team meetings and staff development, coaching teachers, making curricula
decisions, and collecting data for school improvement. Supervised internships are required for
literacy coaches and other literacy leaders.

**READ 8304 Curriculum Design and Evaluation of Literacy Programs**
This course focuses on designing and assessing literacy curriculum, including evaluating literacy
programs and materials and analyzing their evidence-based rationales, aligning curriculum to
state and professional standards, creating activities and rubrics to match curriculum, and using
school-embedded professional development to achieve literacy goals.

**READ 8305 Literacy Coaches as Agents of Change**
This course focuses on the roles and responsibilities of a literacy coach, including specialized
techniques and language prompts for scaffolding teachers. An emphasis is placed on observing
change over time in knowledge levels and types of self-reflection. Other responsibilities include
modeling lessons, conducting team meetings, leading study groups, selecting materials, and
collecting and analyzing data for school improvement.

**READ 8320 Phonology, Orthography, and Linguistic Processes in Reading**
This course focuses on the theories of written language learning, including how phonological and
orthographic language systems change over time. Theories and research related to letters,
sounds and their relationships, word patterns, and spelling knowledge will be used to plan
reading instruction. An emphasis will be placed on the role of texts for stimulating print
awareness and developing strategies for integrating multiple sources of information.

**READ 8330 Cognitive and Social Theories in Literacy Learning**
This course examines theories of cognitive, linguistic, and social learning and their practical
implications for teaching students in the elementary and middle grades. A focus is placed on
using language as a problem-solving tool for learning about literacy. Research-based components
of literacy are examined and applied to the everyday context of teaching and learning.

**READ 8340 Research in Language and Literacy Acquisition**
This course examines the theories and research on language and literacy acquisition, including
the description of methods and techniques employed in literacy research. Students design and
conduct a research project in a literacy-related area.

**READ 8342 Reading Comprehension: From Research to Practice**
This course examines the theories and research on reading comprehension and implications to
instructional practice, including cognitive, social, linguistic, and motivational influences in
comprehending messages.

**READ 8345 Theoretical Models and Historical Perspectives in Literacy**
This course examines contemporary models of reading, including information processing,
interactive, transactional, psycholinguistic, sociocognitive, and other prominent models of
reading. Candidates will trace the history and pertinent influences on the teaching of reading and
reading practices from colonial to contemporary times.

**READ 8348 Scholarly Writing in Literacy**
The course focuses on how to prepare reading candidates to write and publish for a scholarly audience, including setting a writing purpose, conducting a literature review, collecting and analyzing data, and presenting information in the appropriate writing format. The course emphasizes the writing process, including drafting, composing, revising, editing, and publishing stages. Students will submit the final manuscript for publication or for a conference presentation.

**READ 8349 Research Practicum in Literacy**
This course focuses on preparing students to participate in a faculty-sponsored research project. Students must also complete an individual study, including a manuscript submission and conference presentation.

**READ 8350 Specialist Thesis I**
Prerequisite: Completion of 27 hours of emphasis requirements or consent of instructor. Orientation to writing a thesis, including preparing a research proposal in the area of reading and conducting an extensive review of related literature in reading research.

**READ 8351 Specialist Thesis II**
Prerequisite: READ 8351. Completion and defense of thesis project.

**READ 8399 Doctoral Seminar**
Advanced topics in reading and language arts selected by the instructor in consideration of the needs and interests of doctoral students. Research and seminal works are analyzed and interpreted. Research designs, procedures and findings are discussed. Student must be admitted to Ph.D. program or have permission of instructor.

**READ 9199-9999 Dissertation**
Prerequisites: Completion of all course work; consent of instructor. Development of a doctoral-level dissertation.

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**RHBL – Rehabilitation of the Blind**

**RHBL 5102, 5202 Workshop**
Offered on demand.

**RHBL 5302 WS: Basic Independent Living Skills for Individuals with Visual Impairments**
Introduction to concepts and techniques to teach individuals with visual impairments the skills and knowledge needed to function in diverse environments. Topics related to the expanded core curriculum will include: concept and motor development, spatial organization and orientation, and skills in the areas of basic orientation and mobility, personal management, communication,
and recreation & leisure. The course will be offered online with a required one-week hands-on workshop.

**RHBL 7111 Introduction to Independent Living for Persons with Visual Impairments**
Introduction to rehabilitation services, social services, professional organizations; introduction to daily living and communication skills for persons with visual impairments. Offered on demand.

**RHBL 7112 Psychological Aspects of Blindness and Visual Impairment**
Historical attitudes toward blindness; impact of culture and gender on attitudes toward disability, methodologies of attitude change, process of adjustment to blindness and vision loss. Offered on demand.

**RHBL 7115 Techniques of Teaching Leisure Time Activities to Persons with Visual Impairments**
Methodologies for teaching recreation and leisure skills to adults with visual impairments. Offered on demand.

**RHBL 7191, 7291, 7391 Independent Study**
Prerequisite: consent of instructor. Offered on demand.

**RHBL 7193, 7293, 7393 Special Topics**
In-depth study of a topic of special interest. Offered on demand.

**RHBL 7270 Interpersonal Skills Training for Counselors**
Carkhuff, related models of interpersonal skills development; focus on developing skill in providing core conditions of a helping/counseling relationship. Offered on demand.

**RHBL 7310 Methods of Teaching Adaptive Living Skills to Persons with Visual Impairments**
Prerequisites: RHBL 5302 WS: Basic Independent Living Skills and RHBL 7312 Braille and Relevant Formats. Methodologies for teaching adaptive skills necessary to perform daily living activities; includes personal management, home management, medical management, and workplace management. Required one week hands-on workshop as part of the online course.

**RHBL 7311 Methods of Teaching Adaptive Communication Skills to Persons with Visual Impairments**
Prerequisite: RHBL 7312 Braille and Relevant Formats. Methodologies for teaching expressive and receptive adaptive communication skills, including Braille, keyboarding, handwriting, recording, and use of assistive computer technology. Required one week hands-on workshop as part of the online course.

**RHBL 7312 Braille and Relevant Formats**
Skills of reading and writing Contracted Standard English Braille, including transcription rules and formats, use of slate and stylus, use of Perkins Braillers. Students taking this course must
have the potential ability to tactually or visually discriminate embossed Braille configurations and may use assistive devices as needed. Students who are uncertain of their ability to meet this requirement should contact the program coordinator for further information and clarification.

**RHBL 7314 Principles of Rehabilitation Teaching**
Prerequisites: consent of the instructor. Principles and philosophies of providing rehabilitation teaching services to adults of all ages with visual impairments; includes conducting needs assessment interviews, writing individualized teaching plans.

**RHBL 7315 Medical Aspects of Blindness and Associated Disabilities**
Anatomy, structure, function of the eye; frequently occurring diseases, malfunctions in children and adults; includes treatment procedures for disease process, rehabilitation and education implications of handicapped effects.

**RHBL 7316 Principles of Orientation and Mobility for the Visually Impaired**
Fundamental principles, theory of sensory information acquisition by the severely visually impaired for nonvisual locomotion; practical applications.

**RHBL 7317 Introduction to Methods of Mobility for the Blind**
Prerequisites: graduate standing, consent of instructor. Practical application of orientation and mobility techniques used by blind, visually impaired; blindfolds, low -vision simulators emphasize use of residual senses to perceive, integrate, react to environmental stimuli; examination, application of fundamental principles, theory of sensory information acquisition by the severely visually impaired. Hands -on workshop required.

**RHBL 7318 Advanced Methods of Mobility for the Blind**
Prerequisites: RHBL 7317, consent of instructor. Techniques of independent mobility for the blind; includes supervised blindfold activities in commercial, rural environments; requires special travel situations, use of public assistance and public transportation, shopping malls, in -store travel. Hands -on workshop required.

**RHBL 7325 Implications of Low Vision**
Prerequisite: RHBL 7315 Medical Aspects or consent of the instructor. Principles of visual perception development; implications of visual field losses; introduction to optics; optical, non -optics low -vision aids, procedures for vision screening; vision stimulation activities; low -vision simulation experiences. Required hands -on workshop as part of the online course or exemption from the course instructor.

**RHBL 7390 Supervised Practice**
Prerequisite: consent of the instructor. Faculty supervised practice in the use of required skills and competencies in the rehabilitation of individuals with visual impairments in rehabilitation or education settings.

**RHBL 7395 Internship**
Prerequisite: consent of the instructor. Professional rehabilitation work experiences in an appropriate rehabilitation or educational setting with individuals with visual impairments.

**RHBL 7399 Professional Project**
Prerequisite: consent of instructor. Development of an original professional paper or media production in student’s area of emphasis; content determined with faculty committee chosen by student; may be research project, grant proposal, philosophical statement, media production. Offered on demand.

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**RHET – Rhetoric And Writing**

**RHET 5202 Teaching Writing in Secondary Schools**
Prerequisite: graduate standing. This is a methods course that is team-taught by the English and Rhetoric and Writing departments. The topics include making classroom presentations, managing small-group work, responding to student writing, evaluating and using secondary school literature and composition textbooks, and learning approaches to teaching literature and writing. It should be taken in conjunction with English 5202.

**RHET 5301 Theories of Rhetoric and Writing**
Prerequisite: graduate standing. An introduction to the formal study of classical and contemporary theories of rhetoric and writing. Emphasis on the practical understanding and application of techniques of rhetorical analysis and criticism.

**RHET 5304 Technical Style and Editing**
Prerequisites: RHET 3301 and RHET 3316 or RHET 3326, or consent of instructor. Institutional and industrial style manuals; editing technical, business, government, scientific reports.

**RHET 5305 Document Design**
Prerequisite: graduate standing. Study and practice of the use of visual elements in technical communication. Emphasis on typography, page layout, data displays, pictorial communication, and usability testing for both print and online documents.

**RHET 5306 Writing for Business and Government**
Prerequisite: graduate standing. Theory of and practice in writing for business and government organizations; includes writing strategies, appropriate diction, report formats.

**RHET 5307 Writing Software Documentation**
Prerequisite: graduate standing. Study and practice of writing documentation for computer software, including printed manuals, tutorials, reference guides, and online help systems. Emphasis on analyzing prospective users and their tasks, interviewing subject matter experts, developing help for different levels of users, writing user-friendly text, editing documentation for style and clarity, and working on a documentation team. Intensive practice with RoboHELP HTML software for composing online help.
RHET 5315 Advanced Persuasive Writing
Prerequisite: graduate standing. Intensive study of classical and new rhetorics. Emphasis on solving rhetorical problems and producing a variety of persuasive texts.

RHET 5317 Advanced Nonfiction Writing
Prerequisite: graduate standing. Writing to explore, investigate, explain; includes writing a variety of professional, scholarly, and popular essays.

RHET 5318 Writing Auto/Biography
Prerequisite: graduate standing. A workshop-centered course focused on developing extended nonfiction essays chronicling events in one’s own life or the lives of others.

RHET 5321 Editing for Publication
Prerequisite: graduate standing. A hands-on experience in pre-production editing for publication. Includes study of the editing process, manuscript acquisition, the peer review process, manuscript editing, editorial correspondence, and pre-production manuscript preparation.

RHET 5322 Advanced Editing
Prerequisite: RHET 4/5304 or RHET 4/5321, or comparable skills as determined by the instructor. Topics include editing graphics, illustrations, and document design; editing for comprehension and organization; editing text electronically, applying styles to text, and creating templates; studying legal and ethical issues in editing; acquiring project management and effective teamwork skills. Students work with actual clients and their document needs. Three credit hours.

RHET 5325 Legal Writing, Reasoning, and Argument
Prerequisite: graduate standing. Designed for all majors, particularly for pre-law students and writers interested in the discourse of the law. Students will read a variety of judicial decisions on current issues such as freedom of speech and complete several relatively short assignments focusing on legal reasoning and argument. Students will also learn how to find information on legal decisions and issues. Graduate students are encouraged to complete an introductory course in persuasive writing and/or rhetoric before taking this course.

RHET 5345 Topics in Persuasive Writing
Prerequisite: graduate standing. Theory and practice of persuasion with topics varying each semester. May be repeated for credit when topic varies.

RHET 5346 Topics in Technical Communication
Prerequisite: graduate standing. Theory and practice of technical communication; topics vary each semester. May be repeated for credit when topic varies.

RHET 5347 Topics in Nonfiction Writing
Prerequisite: graduate standing. Theory and practice of nonfiction writing with topics varying each semester. May be repeated for credit when topic varies.
RHET 5371 Writing on the Web
Prerequisite: graduate standing. An introduction to the rhetorical aspects of web design and construction that emphasizes audience(s), purpose(s), and accessibility issues such as website navigation, readability, visual design, and ADA compliance.

RHET 5375 Grant Writing
Prerequisite: graduate standing. Survey, theory, and practice of grant writing (solicited and non-solicited) and the philanthropic sector. Topics include, but are not limited to, finding and researching a foundation, finding and using resources for each stage of the grant writing process, developing a problem statement, creating objectives and goals, creating a budget, and working with foundations.

RHET 7150, 7250, 7350 Independent Study
Prerequisites: graduate standing and consent of instructor. Intensive research and writing under faculty supervision on an approved topic in an area not covered in regularly scheduled course offerings; written proposal and final product required. No more than three hours may count toward concentration requirements. Additional hours may fulfill cognate requirements. May be repeated once for degree credit.

RHET 7161, 7261, 7361 Editing Internship
Prerequisite: graduate standing, recommendation of the departmental editing track coordinator. Hands-on editing experience in a professional workplace. Work hours, activities, and responsibilities must be specified in a written agreement between employer and the student in consultation with the editing track coordinator. Credit hours may vary (1-3). May be repeated for credit.

RHET 7300 Introduction to Research Methods
Prerequisite: graduate standing. An introductory course in research methods used to study writing in the classroom and workplace; quantitative and qualitative design; ethics of human subject research.

RHET 7310 Composition Theory
Prerequisite: graduate standing. Contemporary research and theory on composing processes; includes the text itself, writing behavior, relationship between cognition and writing, writing contexts and communities, development of the individual writer; requires extensive research.

RHET 7311 Rhetorical Theory
Prerequisite: graduate standing. Nature, extent, practice of rhetoric; emphasis on necessity of integrating a solid understanding of rhetorical theory with extensive writing in a variety of modes for a variety of audiences and reasons.

RHET 7312 Language Theory
Prerequisite: graduate standing. Research and theory concerning acquisition and nature of functional language competence, including oral and written language and the movement from
oral to written discourse.

**RHET 7313 Theory of Technical Communication**  
Prerequisite: graduate standing. Research and theory concerning writing in professional settings; includes study of processes and products of writing in the workplace, theories informing technical communication, influence of new technologies, implications for pedagogy and practice. Requires extensive research and writing.

**RHET 7320 Working with Writers**  
Prerequisite: graduate standing. Study of a variety of writing processes, strategies, skills for writers. Emphasis on practical applications for writers and writing teachers in academic, work, and other settings.

**RHET 7330 Topics in Nonfiction Writing**  
Prerequisite: graduate standing. Advanced study of theoretical, practical, or pedagogical topics related to nonfiction writing. May be repeated for credit when topic varies.

**RHET 7331 Topics in the Essay**  
Prerequisite: graduate standing. Advanced study of theoretical, practical, or pedagogical topics related to the essay. May be repeated for credit when topic varies.

**RHET 7332 Topics in Extended Nonfiction**  
Prerequisite: graduate standing. Advanced study of theoretical, practical, or pedagogical topics related to extended nonfiction writing. May be repeated for credit when topic varies.

**RHET 7335 Topics in Rhetoric**  
Prerequisite: graduate standing. Advanced study of theoretical, practical, or pedagogical topics related to rhetoric. May be repeated for credit when topic varies.

**RHET 7340 Topics in Technical, Business, and Government Writing**  
Prerequisite: graduate standing. Advanced study of theoretical, practical, or pedagogical topics related to technical communication. May be repeated for credit when topic varies.

**RHET 7360 Internship/Practicum**  
Prerequisites: graduate standing, recommendation of the departmental internship/practicum coordinator. Hands-on writing experience in a professional workplace. Work hours, activities, and responsibilities must be specified in a written agreement between the employer and student in consultation with the internship/practicum coordinator. May be repeated for credit.

**RHET 7370 Theory of Computer-Mediated Communication**  
Prerequisite: graduate standing. Studies in various theories of computer-mediated communication. Includes areas such as uses and abuses of power online and explorations of writing processes in online environments.
**RHET 7380 Writing and Service Learning**
Prerequisite: graduate standing and permission of the instructor. Community service projects involving writing. Initiatives will vary according to community needs and abilities of students. Final reflection paper required. Three hours may be applied to either concentration. May be repeated for cognate credit.

**RHET 7395 Cooperative Education**
Prerequisites: graduate standing and recommendation of the departmental cooperative education coordinator. Hands-on writing experience in a professional workplace. Work hours, activities, and responsibilities must be specified in a written agreement between the employer and student in consultation with the cooperative education coordinator and in coordination with the Office of Cooperative Education. May be repeated for credit.

**RHET 7399 Writing Research Proposals and Reports**
Prerequisite: graduate standing. Reference bibliography methods, research methods, proposal and report writing; includes a research project in an area chosen by the student with a faculty sponsor from the research area responding to the project’s substance and methodology.

**RHET 8300 Final Project**
RHET 8300 Prerequisites: completion of PTW graduate course work, consent of graduate coordinator. Attend class, develop and present final project proposal (including project description, survey of literature, timetable, names of committee members) to graduate faculty for approval; complete portfolio.

**RHET 8301 Final Project**
Prerequisite: RHET 8300. Completion and defense of final project, approval of supervisory committee, and acceptance of project by Graduate School.

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**SCED – Secondary Education**

**SCED 7104 Curriculum Design Practicum**
Prerequisite: SCED 7306. Co-requisite: SCED 7201. A field placement centered around a technology-enriched environment. Preprofessionals work with students in a facilitative learning environment that includes students with special needs. Inquiry and problem-based teaching strategies are observed. Preprofessionals focus on technology in teaching and learning strategies and digital equity.

**SCED 7105, 7205, 7305 Independent Study**
Prerequisite: consent of instructor. Offered on demand.

**SCED 7106 Instructional Skills Practicum**
Co-requisite: SCED 7306. Observing and assisting Master teachers and testing candidate’s knowledge and selected skills of instruction, and management in metropolitan, multicultural
secondary school classrooms.

SCED 7201 Curriculum Design Seminar
Prerequisite: SCED 7306. Co-requisite: SCED 7104. This course emphasizes the development of content specific and integrated thematic curricula. Students will develop teaching units that address the inclusion of students with special needs. Inquiry and problem-based teaching strategies will be modeled. The internet and technology as an integrative tool will be utilized to develop pedagogical techniques and materials in relation to whole course design with cross-disciplinary focus and active student involvement. All projects and assignments will be posted to the SCED 7201 discussion list for peer collaboration and review.

SCED 7202 Specialized Instructional Methods
Co-requisite: SCED 7103. Objectives, philosophy of the subject field as applied to secondary education; consideration of issues, research in the content areas; application of adaptive and unique instructional strategies, methods to specific areas.

SCED 7301 Secondary School Curriculum
Theory, practice of the secondary school program; includes patterns of organization, techniques for development, overview of secondary curriculum trends, issues, current status as a whole and in each subject field; curriculum specialists in subject areas assist with instruction, development of applicable curriculum.

SCED 7302 Trends and Issues in Secondary Education Seminar
Co-requisite: SCED 7201 or TCED 7303. A study of trends and issues pertaining to the goals, analysis of the teacher’s role in dealing with current concerns in these areas.

SCED 7304 Action Research Project
Co-requisite: SCED 7302. (Topic chosen with and approved by project advisor at least four weeks before registration.) Student designs, implements research project on a topic addressing educational issues in multicultural and mainstreamed secondary school environments; requires written report and oral defense before committee. (Projects by in-service teachers are usually conducted in their own classes).

SCED 7306 Instructional Skills and Classroom Management
Co-requisite: SCED 7106. Students develop pedagogical techniques, activities, and assessments that encourage and promote learning. This course also includes the study, analysis, and development of teaching, human relations and management models, skills, and techniques, which are tested in the practicum.

SCED 7601 Internship
Prerequisite: 21 hours completed in the program, including SCED 7201, and passing scores on Praxis II Content. Co-requisite: SCED 7302. Students spend a full semester in a secondary school, under supervision of a secondary cooperating teacher or mentor and a University supervisor, observing, teaching, participating in activities involving the school, community.
**SOCI – Sociology**

**SOCI 5301 Computer Use: Packaged Programs**
Prerequisites: SOCI 2381, 3385. Using various statistical and graphics packages, such as SPSS and SAS, to research designs. Students select an appropriate analysis from the Institute for Social Research, General Social Survey, or other appropriate data base and write up the results of this analysis. Offered on demand.

**SOCI 7370 Program Planning and Research in Organizations**
Program planning issues, such as design, decision making, budgeting, community organizing, organization environment relations, intergovernmental relations, personnel management, in a wide variety of complex organizations; includes research methodologies appropriate to organizational planning, implementation, and evaluation.
PSYC 7321, 7621 Independent Study in Applied Psychology

**SOCI 7375 Program Evaluation**
Prerequisites: SOCI 3175, 3375. Application of research methods to evaluation, assessment of programs in education, social work, corrections, health, mental health, job training, community action, etc. Students design, conduct evaluation research on an ongoing program.

**SOCI 7390 Independent Study**
Prerequisite: Consent of Instructor. Consent will be based on intersection of faculty expertise and student/program need. Specialized instruction on sociological topic.

**SOWK – Social Work**

**SOWK 5310 Social Gerontology**
Prerequisite: graduate standing. This course explores the social aspects of aging – how do older adults affect society and how does society affect older adults? The interaction of older adults with society is examined along with many of our social institutions such as family, healthcare, government, and the economy. Also examined are the issues associated with our aging population and how those issues affect people of all ages. A number of current controversies associated with our changing population structure will be discussed in class.

**SOWK 5330 Introduction to Animal Assisted Therapy**
Course provides an overview of the interdisciplinary field of animal-assisted therapy and the human-animal bond. Course will include observations of AAT visits to human service settings and web enhanced classes.

**SOWK 5336 Social Aspects of Death and Dying**
Gerontology and social work seek to apply knowledge from the social sciences, medicine, and the humanities with the skills and values of the helping professions. The multidisciplinary study of
death (thanatology) itself comes out of studying these different disciplines. There are many social, psychological, philosophical, and religious theories concerning the passage of death— for both ourselves and those around us. We will study many diverse contributions in the social aspects of death and dying.

**SOWK 5337 Adult Development and Aging**
This course emphasizes the life course perspective as it looks at adult development and aging within the context of the social environment. Aspects of “successful aging” that will be examined cover growth and development from emerging adulthood to old age, and the impact that culture, gender, ethnicity, and individual differences have on these processes. Human development and aging is examined during early adulthood, middle adulthood, and late adulthood. We will study aspects of development that are common to persons at all ages across the life course, individual differences in development, and differences that characterize the separate age cohorts.

**SOWK 7301 Foundations of Social Work Practice I**
Pre or corequisite: SOWK 7330. Study of social work profession and roles, values, and ethics of the profession; the generalist perspective; ecosystems perspective; strengths focus; empowerment practice; and the skills of engagement, assessment, and planning.

**SOWK 7302 Foundations of Social Work Practice II**
Prerequisite: SOWK 7301. Continuation of SOWK 7301. Study of strategies and techniques of intervention with individuals, families, groups, organizations, and communities; practice evaluation; and termination.

**SOWK 7316 Advanced Standing Seminar**
Prerequisite: Advanced standing admission. Corequisite: SOWK 7603 and pre or corequisite SOWK 7370, 7391. Course is integrated with advanced standing internship to foster in-depth development of assessment, planning, intervention, and evaluation skills with a variety of client systems.

**SOWK 7320 Health and Biology of Aging**
Prerequisite: Graduate Standing. Understanding the consequences of aging and the extension of life expectancy requires the concurrent understanding of the interrelationship of biology and behavior. Research on “normal” aging over the life span offers the potential of understanding the changes that occur with age so that we can use this understanding to anticipate and cope with those physiological and behavioral functions altered by aging in ourselves and as caregivers. The course will examine physiological and epidemiological studies of disease and aging as well as the alteration in sensory perception, muscle function, etc. Finally, the issues of interventions, realistic expectations, and ethics will also be examined.

**SOWK 7321 Aging and Social Policy**
Prerequisite: graduate standing. This course offers an overview of aging and social policy issues, especially at the state and federal levels of government. Non-governmental agencies and organizations are also included. The aging network, healthcare including Medicare and Medicaid,
as well as Social Security and retirement financing are highlighted. The course begins with a historical perspective on how we have gotten to our present health care policies. It then describes the aging network as well as the programs and services for the older adult that comprise this network.

**SOWK 7322 Assessment and Care Management of the Older Adult**
Prerequisite: graduate standing. Assessment and Care Management with the Older Adult will offer students a comprehensive review of the emerging professional practice of Geriatric Care Management (GCM). Throughout this course students will review a variety of geriatric assessments as well as study case management tools such as engaging, assessing, planning, intervening, evaluating and terminating client cases. Critical thinking as an ethical professional will be emphasized as well as beginning interviewing skills.

**SOWK 7323 Social and Emotional Implications of Illness and Disabilities**
Prerequisite: graduate standing. Health care has become increasingly complex in the early 21st century. Those with a variety of developmental as well as acquired impairments and disabilities challenge the ability of society to mainstream a large minority of our citizens. An aging population with more chronic rather than acute health care needs is also a central concern. Finally, in the age of AIDS and other life threatening diseases, professional expertise in the psychological and social implications of illness and disability is a necessary skill. Professionals also have an increased responsibility to better understand the ethical as well as the bio-psycho-social-spiritual aspects of illness and disability in the individual, the family and the wider community.

**SOWK 7330 Human Behavior in the Social Environment I**
Prerequisite: program admission. This course covers human behavior theories supporting social work practice with individuals, families, groups, organizations, and communities. The ecological perspective and its impact on human development and non-mainstream groups will be addressed.

**SOWK 7331 Foundations of Social Work Practice III**
Prerequisite: SOWK 7330. This course explores the application of social work skills to practice within communities and organizations. Students will assess a target community, write grant proposals, and learn the practice of interactive supervision.

**SOWK 7350 Social Welfare Policies and Services**
Prerequisite: program admission. Study of the history and current structure of social welfare policy, the impact of discrimination, poverty and oppression on populations-at-risk, the response of society to social problems, and the skill of policy analysis.

**SOWK 7370 Social Work Research Methods**
Prerequisite: program admission or special permission from instructor. The study of social work research methodology, critical evaluation of published research, the values and ethics of research practice.
**SOWK 7390 Diversity and Oppression**  
Prerequisite: program admission. Ethnic, racial, gender issues as related to social policy, human behavior and the social environment, practice issues; developmental, socioeconomic factors influencing gender roles; historical considerations and cultural and social context for social work practice among oppressed persons, people of color.

**SOWK 7391 Assessment and Differential Diagnosis**  
Prerequisite: SOWK 7330. Psychopathology in children, adults; uses individual life cycle as framework for biological, social forces that prevent, limit individual social, psychological adaptation to environment during maturation process; emphasis on influence of gender and race on development of mental disorders, individual adaptation to social environment; use of Diagnostic and Statistical Manual, DSM-IIIR as diagnostic reporting tool.

**SOWK 7394 Social Work Practice in Schools**  
This course is an elective course designed to prepare students to be informed, resourceful, and proactive in providing services in the complex and dynamic context of the schools. The purpose of this course is to provide the social work student with knowledge of theories, concepts, and research about social work practice in schools. This course encourages students to engage in critical thinking which requires the synthesis and communication of relevant information about school social work theory and practice.

**SOWK 8191 Guided Study**  
Prerequisites: consent of instructor, advisor, program director (Available, with a two-hour social work elective, to students from other graduate programs who wish to take social work electives but require three credit hours for their own program.). Directed individual study arranged by student.

**SOWK 8204 Crisis Problem Solving**  
Prerequisite: completion of the foundation year graduate program. Theoretical concepts, treatment strategies for crisis situations; focus on planned brief treatment of individuals or families in stressful situations using cognitive or problem-solving approaches.

**SOWK 8205 Group Treatment**  
Prerequisite: graduate standing. Group leadership to provide therapeutic intervention to members; leading groups with different needs, such as mental illness, antisocial behavior, addictions, neurosis, behavior changes.

**SOWK 7392 Special Topics in Clinical Social Work**  
This course is focused on evidence-based practice models for clinical social work practice. This course presents current and contemporary mental and behavioral health treatment models and is highly application oriented. The overall goal of the course is to help students develop beginning level knowledge and skills in the treatment and prevention of psychosocial dysfunction, disability, or impairment, including emotional and mental disorders.
**SOWK 7403 Social Work Internship I**
Prerequisites or co-requisites: SOWK 7301, 7330, 7350, 7390. (SOWK 7403 and 7404 must be completed consecutively, in the same agency setting). Supervised direct service activities; practical experience in applying foundation theory, skills; developing integrated social work practice skills with individuals, families, groups, communities; focus on developing professional relationships, initial intervention stages with client systems; requires 240 clock hours of placement. Graded credit/no credit.

**SOWK 7404 Social Work Internship II**
Prerequisite: SOWK 7403. Prerequisites or co-requisites: SOWK 7302, 7331, 7370, 7391. (SOWK 7403 and 7404 must be completed consecutively, in the same agency setting). Continuation of SOWK 7403; requires 240 clock hours of placement. Graded credit/no credit.

**SOWK 7603 Advanced Standing Social Work Internship**
Prerequisites: Advanced Standing admission. Pre or co- requisites: SOWK 7370, 7391, 7316 and 7316 co-requisites. Supervised direct service activities; practical experience in applying foundation theory, skills; developing integrated work practice skills with individuals, families, groups, communities, organizations; focus an professional relationships, initial intervention stages with clients systems; requires 240 clock hours of placement. Six credit hours.

**SOWK 7803 Social Work Block Internship**
Co-requisites: SOWK 7301, 7302, 7330, 7331, 7350, 7370, 7390, 7391. 480 hours of supervised social work practice in applying foundation year theory, skills and social work values and ethics. Students practice engagement, interviewing, assessment planning, basic intervention, evaluation and termination skills at all systems levels.

**SOWK 8159 Evaluation Research II**
Prerequisite: SOWK 8259. Evaluation research design, data collection, data analysis, and reporting; the political contexts of needs assessment and program evaluation.

**SOWK 8206 Psychodrama**
Prerequisite: completion of the foundation year graduate program. Technique originated by J.L. Moreno; personality makeup, interpersonal relationships, emotional problems, decisions, conflicts are explored by dramatic enactment in a positive, supportive setting.

**SOWK 8207 Child Behavior and Treatment**
Prerequisite: completion of the foundation year graduate program. Psychosexual, social, cognitive, physical development of children; major diagnostic categories; treatment approaches reviewed, evaluated for appropriateness according to individual child, family environment needs.

**SOWK 8208 Child Abuse and Treatment**
Prerequisite: completion of the foundation year graduate program. Variables in child maltreatment; physical, psychological, emotional, social implications; social work methodologies; role of multi-disciplinary teams.
SOWK 8209 Community Social Work
Prerequisite: graduate standing. Social context, practice parameters of community social work; emphasis on organizational analysis, problem identification, community organization strategies for social change and institution building, leadership development, community research.

SOWK 8211 Social Work Practice with Older Adults
Prerequisite: graduate standing. Biopsychosocial/cultural approach to aging; includes demographic, attitudinal aspects; impact of race, gender, class, ethnicity; health, mental health issues; assessment factors; long-term care continuum; roles of families; special policy issues; social work approaches.

SOWK 8213 Supervision
Prerequisite: graduate standing. Purpose, functions, processes; emphasis on beginning-level interactional skills.

SOWK 8215 Domestic Violence
Prerequisite: graduate standing. Current theories, research, social work practice; violence against women, children, elderly.

SOWK 8218 Grief, Loss, and Social Work Practice
Prerequisite: graduate standing. Basic assessment and intervention skills for practice with client systems experiencing grief and loss.

SOWK 8230 Evidence-based Social Work Practice in Adult Mental Health
Prerequisite: graduate standing. Evidence-based Social Work Practice in Adult Mental Health builds on Assessment & Differential Diagnosis and provides knowledge of evidence-based practice approaches for adult clients who have a DSM- IV-TR diagnostic condition. This course will cover those psychiatric disorders commonly encountered in social work practice: anxiety, personality, mood, substance use, and psychotic disorders. Emphasis is placed on cultural and social aspects of mental health and issues important to populations at risk. An ecological and bio-psychosocial perspective is utilized to develop assessment and treatment strategies that are evidence-based and consistent with cultural and other issues related to diversity. The course will explore mental health care as it is delivered in a variety of settings: outpatient versus inpatient, residential and day treatment, acute versus long term, and private practice versus the community mental health setting. The course will enlighten the student to the range of issues, ethical and otherwise, that impact this population: legal, economic, relational, medical, and educational.

SOWK 8231 Addictions Treatment
Prerequisite: graduate standing. Dynamics of addiction, treatment; biological, social, societal aspects of addiction; implications for treating special populations.

SOWK 8234 Personality Theory
Prerequisite: graduate standing. Several frames of reference on personality theory; includes historical antecedents, major concepts, applicability to social work practice, limitations of various
theories.

**SOWK 8235 Spirituality in Social Work**
Prerequisite: graduate standing. This course provides the general framework for dealing with spiritually sensitive social work situations. It provides the students with the content for dealing with the matters of the human spirit.

**SOWK 8236 Human Sexuality and Social Work Practice**
Prerequisite: completion of the foundation year graduate program. This course provides students with a multidisciplinary approach to human sexuality. Students will have the opportunity to explore views experiences, values, and beliefs and how these impact on the clients which they serve along with the societal and cultural issues that may impact upon clients of social work and other mental health professionals.

**SOWK 8238 Women & Family Issues in Social Work**
This course will examine women’s and family issues in social welfare with particular attention to the social service delivery system, significant historical and contemporary federal/state policy issues, and the social work profession. Several special populations of women will be considered, including poor women, survivors of violence, and older women. Specific topics to be addressed in this course are work/family issues, welfare and poverty, violence against women, and care giving.

**SOWK 8251 Juvenile Delinquency**
Prerequisite: graduate standing. Forms of unlawful behavior during adolescence, early adulthood; major theories of delinquent behavior, including control, anomic, subcultural, interactionalist, labeling, classical; major theories of justice, including classical, just desserts, deterrence, rehabilitation models.

**SOWK 8253 Law and Social Work**
Prerequisite: graduate standing. Areas of law that shape, regulate the social work profession; contributions, significance of legal issues to client services, the profession; legal policies that may control, restrict clients’ lives.

**SOWK 8259 Evaluation Research I**
Prerequisite: SOWK 7370. Management and community practice applied to the methods of social work practice evaluation through needs assessment and program evaluation. Builds on foundations provided in SOWK 7370, extending into macro-practice research at the organizational and community level. Emphasizes empowerment evaluation as a mechanism to foster improvement and self-determination. A theories-of-change approach is used to guide evaluation.

**SOWK 8271 Research Project**
Prerequisites: SOWK 7370 and 8371 or consent of instructor. Steps in carrying out a research project; all phases of research methodology.
**SOWK 8242 Global Perspective in Social Work**

Prerequisite: Graduate Standing. Building a first-year domestic social policy courses, the purpose of this course is to expose students to a variety of global social issues related to social welfare and social development. Using film as the medium students will engage in critical thinking and analysis of social welfare issues, and explore how political, economical, cultural, religious, historical and environmental factors impact social welfare policies and the delivery of human services in different regions of the world. This course is useful for those who have had previous international experience and/or those who are interested in international social work and are looking for a forum in which such experiences and interests can be processed in the context of existing theoretical frameworks and models of social welfare service delivery.

**SOWK 8240 Psychodynamic Psychotherapy**

Psychodynamic Psychotherapy provides an overview of Freudian drive/structural theory and the central concepts of early psychoanalytic thinking. The basic principles of psychodynamic psychotherapy will then be covered with a review of how certain concepts proposed by Freud have been adhered to, changed, modified, or abandoned altogether. The theoretical basis for dynamic therapy will then be covered along with a brief overview of current schools of psychodynamic theory. An evidence-based ego-psychological/object relations approach to assessment and treatment of neurotic, borderline, and psychotic disorders is then be presented. The ego psychological component will address the assessment of person-in-situation factors; issues related to adaptation; and ego functions, including defense mechanisms that span the range of mature-higher/lower level-psychotic. Particular emphasis will be placed on the object relations component of this theory, focusing on the developmental trajectory of object relations and specific fixation points that result in character pathology, organized at a psychotic, borderline or neurotic level.

**SOWK 8242 Global Perspective in Social Work**

Prerequisite: Graduate Standing. Building a first-year domestic social policy courses, the purpose of this course is to expose students to a variety of global social issues related to social welfare and social development. Using film as the medium students will engage in critical thinking and analysis of social welfare issues, and explore how political, economical, cultural, religious, historical and environmental factors impact social welfare policies and the delivery of human services in different regions of the world. This course is useful for those who have had previous international experience and/or those who are interested in international social work and are looking for a forum in which such experiences and interests can be processed in the context of existing theoretical frameworks and models of social welfare service delivery.

**SOWK 8292 Guided Study**

Prerequisites: consent of instructor, approval of course outline by school’s Curriculum Committee. Directed individual study arranged by student.

**SOWK 8301 Advanced Directed Practice I**

Prerequisite: concentration year standing. Developing biopsychosocial framework for assessment, intervention; focus on careful assessment, diagnosis prior to clinical interventions.
SOWK 8302 Advanced Directed Practice II
Prerequisite: SOWK 8301 or MFT-GC admission. This course provides knowledge and skills about social work practice with couples and families. It studies the major schools of family theory, methods for practice with families, and systemic links between family, culture, and society.

SOWK 8303 Couples Treatment
Prerequisite: Completion of the Foundation Year of the MSW or similar MA program and admission to the MFT certificate program. Couples Treatment is a course designed to apply principles of family therapy theory to work with couples. Students are challenged to consider differences and similarities between individual, family, and couples treatment. Cognitive Behavioral Couples Therapy, Object Relations Couples Therapy, Brief Strategic Couples Therapy, and Narrative Couples Therapy will provide the theoretical foundation for examining issues couples face. Issues related to same-sex couples, domestic violence, infidelity, and addiction will be examined as part of the course.

SOWK 8305 Management and Community Practice I
Prerequisite: concentration year standing. Management, administration in social work, human services; includes decision making, leadership styles; basic tasks, roles, skills of managers; management processes such as financial, human resource management.

SOWK 8306 Management and Community Practice II
Prerequisite: SOWK 8305. Continuation of SOWK 8305; use of competing values framework (a meta-theoretical model) to integrate management skills of boundary-spanning, human relations, coordinating, directing.

SOWK 8308 Ethical Issues in Couple and Family Therapy
Prerequisite: admission to the MSW program or the MFT-GC program. Designed to provide knowledge necessary for understanding legal and ethical issues that confront practice. The legal responsibilities of the family therapist are examined with emphasis on personal and professional development. Ethical issues related to diversity are considered within the context of couple and family therapy.

SOWK 8309 Intergenerational Family Therapy
Prerequisite: admission to the MSW program or the MFT-GC program. Provides students with knowledge on family functioning across generations based on Murray Bowen’s theories. Application of theories through the use of family assessment and intervention techniques.

SOWK 8310 Sociology of the Family
Prerequisite: admission to the MSW program or the MFT-GC program. Course will focus on the family as an institution responsive to social and economic change. It will provide a knowledge base in institutional and historical aspects of the family. The course is required for the Marriage and Family Certificate.

SOWK 8311 Family Life Cycle
Prerequisite: Graduate Standing. Focus on the theoretical underpinnings of the many and varied life cycles families experience. Particular emphasis will be placed on cultural influences and populations at risk.

**SOWK 8312 Play Therapy**
Prerequisite: Concentration year standing, MFT-GC, program or instructor permission. This course provides introductory instruction in history, theories, and applications of play therapy consistent with Association of Play Therapy (APT) requirements. Students are expected to have successfully completed course work in child development (e.g., Advanced Direct Practices I) Special issues affecting oppressed children will be addressed, including: parent-child problems, divorce, abuse/neglect /abandonment, etc. Diversity issues will also be explored as key components of competent play therapy practice. Students will be challenged to apply what they are learning about work with children in mock clinical sessions. This three-hour graduate level semester course, according to APA, is consistent with APT requirements for instruction, and provides 67.5 Continuing Education (CE) hours toward the mandatory 150 required for RPT certification.

**SOWK 8320 Family Mediation**
Focuses on social work practice in family mediation. It will equip students with the skills and information needed to meet requirements of the Arkansas Dispute Resolution Commission for their family mediation roster.

**SOWK 8340 Aging and Social Policy II**
Health needs of the elderly and health care systems that address them; mechanisms for health care delivery and for financing institutional community-based care; effects for elderly of reform proposals.

**SOWK 8346 Family in Late Life**
Prerequisite: graduate standing. Family life of the elderly; includes late-life marital relationships; widowhood, living alone; relations with children, grandchildren, siblings, other kin; alternative, innovative lifestyles; neglect, abuse of the elderly; demographic, structural changes in family, society that affect these matters; core concept is the family as a natural support system for the elderly; its potential and limitations in a context of community support networks.

**SOWK 8371 Statistics for Social Work**
Prerequisite: SOWK 7370 or special permission from Instructor. Statistics, their use in analyzing data; probability, inferential, decision-making, basic statistics; includes central tendencies, variability, data distributions, bivariate, multivariate procedures; critiquing articles in social work journals.

**SOWK 8390 Advanced Direct Practice III**
Prerequisite: SOWK 8301. Corequisite: SOWK 8302. This course provides knowledge about social work practice with groups with an emphasis on the application of group theory to many forms of groups in a variety of settings. This course will include content on supervision of workers learning
group practice skills.

**SOWK 8503 Advanced Direct Practice Internship I**  
Prerequisite: concentration year standing. Pre or corequisite: SOWK 8301. (SOWK 8503 and 8504 must be completed consecutively, in the same agency setting). Hands-on experience with individuals, groups, families; emphasis on applying concepts from SOWK 8301; requires 360 clock hours of internship placement. Graded credit/no credit.

**SOWK 8504 Advanced Direct Practice Internship II**  
Prerequisites: Social Work 8301, 8503. Pre or corequisite: SOWK 8302. (Social Work 8503 and 8504 must be completed consecutively, in the same agency setting). Continuation of Social Work 8503; focus on integrating knowledge in preparation for professional practice; requires 360 clock hours of placement. Graded credit/no credit.

**SOWK 8507 Internship I Management & Community Practice**  
Prerequisite: concentration year standing. Corequisite: SOWK 8305. (SOWK 8507 and 8508 must be completed consecutively, in the same agency setting). Experience working in a social service agency in an administrative capacity; requires 360 clock hours of placement. Graded credit/no credit.

**SOWK 8508 Internship II Management & Community Practice**  
Prerequisites: SOWK 8305, 8507. Corequisite: SOWK 8306, 8159. (SOWK 8507 and 8508 must be completed consecutively and in the same agency setting). Continuation of SOWK 8507; focus on integrating knowledge, assuming responsibility for administrative functions, including planning, evaluation. Graded credit/no credit.

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**SPCH – Speech Communication**

**SPCH 5310 Investigations into Communication**  
Prerequisite: SPCH 1300, 4300. This course addresses the applied role of communication research methods in a variety of contemporary organizations. Topics include the research process, both quantitative and qualitative research approaches, as well as questions of research ethics. The focus is on identifying the practical applications of research methods for organizational members.

**SPCH 5311 Organizational Communication**  
Prerequisite: SPCH 1300, or consent of the instructor. This course examines organizational communication theories, communicative implications of historical and modern management theories, as well as special interest topics. Major topics include cultural and critical approaches to organizational communication, classical management and human relations theory, and communication effectiveness. Special topics may include teams in organizations, diversity, organizational politics, leadership, and change. The focus is on applying organizational communication theories and concepts to understand others better and to control one’s own
communication in organizations

**SPCH 5312 Intercultural Communication**
Prerequisite: SPCH 1300. This course examines culture as it influences human interaction in a wide range of contexts, including work, medical, interpersonal, and political. Topics include culture shock, language, nonverbal, intercultural conflict, and culture and the media. The focus is on using major intercultural communication theories and concepts as well as in-class activities to develop a heightened awareness of intercultural issues and intercultural communication competence.

**SPCH 5313 Seminar: Topics in Communication**
Prerequisite: SPCH 1300. This course investigates timely communication theories, skills, and practices. Topics may be selected from a variety of theoretical or practical perspectives. The focus is on an in-depth treatment of a content area not typically represented in other courses in the major. This course may be repeated for credit.

**SPCH 5323 Family Communication**
This course examines communication networks within families that support or inhibit cohesion or change. Topics include: family systems, communication patterns, self-disclosure, family themes, rules, relational stages, conflict styles, power, and decision-making. Students analyze applied communication research and theory and make application to cases.

**SPCH 5324 Organizational Communication II**
Prerequisite: SPCH 5311. This seminar addresses special topics in organizational communication. Course topics may include organizational identification, risk and issue management, organizational change, or critical approaches to organizational communication. The focus is giving students an in-depth understanding of a specialized aspect of organizational communication.

**SPCH 5350 Effective Crisis Communication**
This course investigates and analyzes instances of effective and ineffective crisis communication. Students will examine the internal organizational processes and the larger environment within which various organizations exist, focusing on issues such as stakeholders, legal environments, and the larger social and cultural contexts.

**SPCH 5357 Communicating with Difference**
This course explores communication and difference in such areas as race and ethnicity, social class, age, sexual orientation and disability. Through applying communication theories and ideas to our experiences in each of the targeted areas, we can emerge with tools to manage communication across lines of difference and create more positive social worlds. Dual-listed in the UALR Undergraduate Catalog as SPCH 4357. Three credit hours.

**SPCH 7300 Interpersonal Communication Concepts**
Prerequisites: graduate standing, consent of instructor. (For on-IOC graduate students.) Concepts of human interaction as basis for developing interpersonal communication skills,
framework for personal growth in one-to-one interaction, small group dynamics, leadership roles, and other interpersonal relationships.

**SPCH 7301 Human Communication Theory**  
Co-requisite: SPCH 7321. Basic theoretical approaches to human communication; includes symbolic interactionism, systems, rules, linguistics, relational, rhetorical theories. Offered in Fall.

**SPCH 7302 Interpersonal Communication: Theory and Context**  
Co-requisite: SPCH 7332. Influence of contexts on various theories of interpersonal communication; each theory is evaluated, placed in a relational context, considered for its applications to personal and professional interaction. Offered in Fall.

**SPCH 7310 Topics in Interpersonal Communication**  
Topics vary; chosen for interest, needs of current class; may include in-depth study of topics from earlier courses. Offered on demand.

**SPCH 7311 Small Group Communication**  
Co-requisite: SPCH 7351. Systems study of small group formation, maintenance, performance; special attention to problem solving in groups. Offered in Spring.

**SPCH 7312 Intercultural Communication**  
Intercultural factors influencing human interaction; how cultures, subcultures interact verbally, non-verbally; how communication patterns are inherently culturally determined. Offered in Summer.

**SPCH 7320 Topics in Organizational Communication**  
Topics vary; chosen for interest, needs of current class; may include in-depth study of topics from earlier courses. Offered on demand.

**SPCH 7321 Organizational Communication Theory**  
Co-requisite: SPCH 7301. Theoretic overview of organizational communication, includes communication flow, networks, organizational relationships, groups, conflict, language. Offered in Fall.

**SPCH 7322 Organizational Communication Culture Analysis**  
This course explores the concept of organizational culture and its relationship to effective and ineffective organizational communication. Students develop an understanding of a model for analyzing organizational culture and communication and apply this model to a case analysis.

**SPCH 7323 Conflict Analysis and Intervention**  
An introduction to conflict dynamics with an emphasis on communication intervention skills; covers different frames for analyzing conflict analysis tools, opportunities for conflict self-assessment, and skill-building in difficult conversations.

**SPCH 7324 Negotiation**
Examination of the nature of conflict and presentation of theories and techniques of negotiation as a method of resolving or managing conflict. Students will analyze cases of negotiation at many levels such as buying and selling, contracts, group decision making, plea bargaining, international treaties, and organizational creation. Emphasis is on solving problems through negotiation. Consideration of the role of third parties. Current events are used for relevant examples.

**SPCH 7330 Communicating Change and Information Diffusion**
This course provides an understanding of diffusion theory, which seeks to explain the process through which new ideas (innovations) spread over time via communication channels among the members of a social system. Students will apply diffusion theory to corporate, public health, social change, and policy contexts.

**SPCH 7332 Communication Assessment and Consulting**
Co-requisite: SPCH 7302. Methods used to assess communication behavior in organizations, prepare intervention techniques, evaluate communication effectiveness. Offered in Spring.

**SPCH 7341 Organizational Communication Applications**
Prerequisite: 15 program hours. Co-requisite: SPCH 7302. Role of applied behavioral research methods in developing effective communication in organizations; focus on use of organization development theories to change the way people in organizations communicate. Offered in Fall.

**SPCH 7350 Seminar in Effective Crisis Communication**
This course investigates and analyzes instances of effective and ineffective crisis communication. Students will examine the internal organizational processes and the larger environment within which various organizations exist, focusing on issues such as stakeholders, legal environments, and the larger social and cultural contexts. Students will apply concepts to case analysis and development of crisis communication plans for actual organizations.

**SPCH 7351 Managerial Communication**
Co-requisite: SPCH 7311. Communication skills needed by supervisors, managers; focus on conflict management, interview skills (selection, performance appraisal, discipline, information gathering); includes theory, research, applied projects. Offered in Spring.

**SPCH 7352 Organizational Communication Training**
Development, delivery of a training project; student prepares and presents an intervention for a specific organizational communication problem. Offered in Summer.

**SPCH 7390 Introduction to Graduate Study in Speech Communication**
Prerequisite: program admission or consent of instructor. (Prerequisite course for entering students with fewer than 18 undergraduate speech hours; does not count toward degree requirements.) Speech communication theories, terminology; program writing, speaking responsibilities; emphasis on research skills necessary for the field. Offered in summer.
**SPCH 8300/8600 Graduate Internship**
Urban-related practical job experience; students apply theoretical knowledge, develop interpersonal and organizational communication skills, meet regularly to share experiences, write a paper related to experiences.

**SPCH 8301/8601 Master’s Research Paper**
Students apply theoretical knowledge to an action research project, dealing with the identification of a need in an organization and the implementation and evaluation of an intervention to meet that need.

**SPCH 8310 Seminar in Applied Communication Studies**
This capstone seminar draws on various applied communication theories to engage students in reflection on two years of study in the program. Students develop and present their final project proposal for their MA in Applied Communication Studies. A final portfolio will be presented before faculty and students. Only students who are in the final semester of this program are allowed to take this course (SPCH 7301; SPCH 7321; plus 12 hours grad level SPCH courses).

**SPCH 8304/8604 Cooperative Education in Interpersonal and Organizational Communication**
Prerequisites: graduate standing and approval of assignment advisor. Job experience in an organization approved by the Speech Communication Department and the Cooperative Education Office. Students gain job experience through application of relevant theories, develop impersonal and organizational communication skills, meet regularly with their faculty member, and complete a major paper reflecting on their experiences in light of communication theory. This course requires a minimum of 200 semester work hours for 3 credit hours or 400 semester work hours for 6 credit hours.

**SPCH 8602 Master’s Thesis**
Prerequisite: successful completion of written comprehensive examinations. Preparation of an appropriate original investigation demonstrating knowledge and methods of scholarship.

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**SPED – Special Education**

**SPED 5202, 5302 Workshop**
Offered on demand.

**SPED 5214 Early Childhood Special Education Assessment Field Experience**
This is the first experience in a series of two supervised field experiences. During the 120 clock-hour experience, student field experiences emphasize assessment and early intervention assessment activities related to child find/screening, translating assessment activities in the intervention environment and assessments surrounding health and safety issues, children with health and/or sensory impairments, social development, and challenging behavior.
SPED 5216 ECSE: Inclusion Field Experience
This is the final experience in a series of supervised field experience designed for students in the Early Childhood Special Education emphasis. The field experiences included in this 120 clock-hour experience examine assessment to intervention activities related to all areas of development, technology adaptations in intervention, the link between individualized intervention plans and instructional planning, and continuous documentation of child performance.

SPED 5266 Language in Deaf Children II
Language development in normal-hearing, hearing-impaired children; relationships between the two populations; relationship of learning theory, cognitive and psychosocio-linguistic principles, other perspectives to language learning, hearing-impaired children; language instruction for teaching language to hearing-impaired children; normal language development, language acquisition theories, and language and cognitive research; includes directed observation.

SPED 5311 Managing the Learning Environment B
Prerequisites: graduate candidates entering with the graduate endorsement only option and must be admitted to the Graduate School. Theory, research, and application for classroom management. Current issues and research in applied behavior analysis and other forms of classroom management; cognitive, behavioral, and emerging management procedures; emphasis will be placed on the application of research. Positive approaches to classroom and behavior management.

SPED 5312 Medical Problems in Child Development
The primary concern of the course is to review medical conditions and events arising during prenatal, postnatal and early childhood which contribute to the nature and cause of major educational disabilities. Special attention is given to syndromes associated with mental retardation, disorders of the central nervous system, infections disease, and a wide range of conditions placing children at risk for developmental delays. Emphasis is directed toward early medical identification, prevention of secondary disabilities, and strategies for responding to chronic health conditions in educational settings. Guest lectures by physicians and other health related professionals are an integral part of the course.

SPED 5313 Early Childhood Special Education Assessment
This is the first course in a two-course sequence addressing assessment and early intervention screening and assessment strategies for young children with disabilities, ages birth through eight. A specific focus will be given to the fundamental principles of and strategies for assessment, the role of well-baby and early intervention providers in screening and assessment process for disabilities. Candidates will learn to identify the needs of children related to health and/or sensory impairments, the identification of abilities in the developmental domains. Various aspects of the early environments are examined and procedures for gathering performance data are explored.

SPED 5315 Early Childhood Special Education: Methods of Inclusion
This is the second course in a two-course sequence addressing intervention strategies for young
children with disabilities, ages birth through age eight. Specific attention is given to application of assessment principles into programming, the role of child find in providing services, the needs of young children with health and/or sensory impairments, strategies for identifying behavioral support needs and techniques for fostering social-emotional development. Attention will also be given to methods of including children with disabilities in the general education setting.

**SPED 5317 Introduction to Inclusion in Early Childhood Special Education**
Prerequisites: PSYC 1300, an introductory human development course, or consent of the instructor. Psychological, sociological, philosophical, legal, educational implications of educating exceptional learners; necessary adaptations for exceptional learners in the mainstream setting; role of teachers, professionals, parents as team members providing education for exceptional learners.

**SPED 5330 Severe Disabilities**
Prerequisites: admission to the program; SPED 4301, EDFN 3320, READ 3320, READ 3322, TCED 3383. This course focuses on current best practices in curriculum, and methods for students with severe disabilities, including specific strategies for teaching students with severe disabilities, general strategies for working with heterogeneous groups of students in inclusive settings, and methods for adapting the general education curriculum to include students with severe disabilities in elementary, middle, and high school.

**SPED 5343 Disability Law**
The purpose of the course is to provide students with the basic understanding of the legal and ethical issues that impact assessment, eligibility, placement, and delivery of services of students with disabilities. The focus will be on the due process procedures and elements of Free Appropriate Public Education (FAPE) necessary for successful teaching of students with disabilities as found in Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act of 1973 and Americans with Disabilities Act (ADA).

**SPED 5360 Psychological Aspects of Deafness**
Theory, research in the psychological development, adjustment of hearing-impaired children, adults; includes intellectual, cognitive, perceptual, social, personality development; adaptation to hearing loss; educational, mental health, rehabilitation implications of research findings with single disability, multi-disabled, hearing impaired persons.

**SPED 5367 Communication Methods with Hearing-impaired Children in the Educational Setting**
Prerequisite: Interpreting 4320/5320 or consent of instructor. Corequisite: Special Education 4264, 4266. Practical application of the multiplicity of methods; research, underlying theories of language acquisition by hearing-impaired children; emphasis on application to teaching English, other academic subjects. Offered in fall.

**SPED 7103 Teaching Adolescents with Exceptionalities**
The legal, foundational, and ethical aspects of serving adolescents with disabilities are provided.
Specialized knowledge related to the development of special education at the secondary level as well as current legal and statutory issues. Psychological, sociological, philosophical, and educational implications of educating adolescent exceptional learners are introduced.

**SPED 7123 Technology for Students with Visual Impairments**

History of technology for individuals with visual impairments; types of technology for individuals with visual impairments; role of technology in education of students with visual impairments; hands-on experience with selected technology tools for students with visual impairment and their teachers.

**SPED 7141 ECSE Clinical I**

Co-requisite: SPED 7341. This is the second experience in a series of three supervised practica. During the 120 clock hour experience, student field experiences emphasize assessment and intervention activities related to child find/screening, the intervention environment, health and safety issues, children with health and/or sensory impairments, social development, and challenging behavior.

**SPED 7142 ECSE Clinical II**

Co-requisite: SPED 7342. This is the third and final experience in a series of three supervised practica designed for students in the Early Childhood Instructional Specialist emphasis. The 120 clock hour field experiences included in this experience examine assessment and intervention activities related to all areas of development, technology adaptations in assessment and intervention, the link between individualized intervention plans and instructional planning, and continuous documentation of child performance.

**SPED 7144 Collaboration in the Field**

Co-requisite: SPED 7344. This is the first experience in a series of three supervised practica for students in the Early Childhood Instructional Specialist emphasis. This course emphasizes practical use of specialized knowledge and application of program performance standards. During the 120 clock-hour practicum, field experiences emphasize teams and the team process, communication skills, collaboration strategies, consultation and professionalism. Activities will be conducted with family members and a variety of related service disciplines.

**SPED 7154 Physical and Health Management**

This course will focus on health management practices for students with disabilities. Students will become familiar with emergency first aid and universal health care precautions, health management plans, guidelines for the administration of medications and the side effects of medication, procedures for managing seizures, treatments for allergies and asthma, and use of gastrostomy tubes. Students will also be given information on proper body mechanics and on positioning and physical management of students with motor disabilities. Taken with SPED 7206 Strategies for Family Involvement.

**SPED 7190, 7290, 7390 Supervised Practice**

Prerequisite: consent of instructor. Practical use of skills, competencies from courses; working
under faculty supervision with individuals with disabilities being served in education and/or rehabilitation settings. Offered on demand.

SPED 7191, 7291, 7391 Independent Study
Prerequisite: consent of instructor. Offered on demand.

SPED 7193, 7293, 7393 Special Topics
In-depth study of selected interest in a special education emphasis area.

**SPED 7203 Adolescents with Exceptionalities**
Enhances knowledge regarding the characteristics, identification, and assessment of adolescents with disabilities. Necessary adaptations for adolescent exceptional learners in the inclusion setting; role of teachers, professionals, parents as team members in identification, assessment and program and instructional design components are presented. Candidates acquire skills needed to support the implementation of behavior intervention and transition plans.

**SPED 7206 Strategies for Family Involvement**
This course will prepare candidates to work with families of students with disabilities. The candidates will identify the impact of disabilities on families and family functioning. Strategies for communicating with families and for involving families in the process of program development and assessment will be included.

**SPED 7292 Field Experience I**
Prerequisite: SPED 7305. The general goal of this course is to build upon the knowledge and skill candidates have gained regarding the characteristics of and service to and evaluation of a variety of learners with disabilities. Procedures for identification and placement of students for special education will be identified and evaluated. Candidates will develop profiles of students who are classified as at risk for developing learning problems and students with varying disabilities and identify instructional support suitable for implementing with non at risk students. Candidates are encouraged to take this course concurrently with SPED 7351.

**SPED 7295 Field Experience II**
Prerequisites: Successful completion of SPED 7351 Assessment and Instructional Design I and SPED 7292 Field Experience I. It is suggested that this course be taken in conjunction with SPED 7352. Assessment and Instructional Design II. Candidates will engage in specific implementation of strategies for students with various learning problems in field sites. Candidates will design and use various informal assessments and analyze them for their application in the pre-referral, referral, evaluation, and IEP development process.

**SPED 7296 Field Experience III**
Prerequisites: Successful completion of SPED 7352 Assessment and Instructional Design II and SPED 7295 Field Experience II with a co-requisite of SPED 7353 Transition and Life Adjustment. This course will expand the application skills developed in the methods classes and SPED 7353. Candidates will use interventions and evaluation skills to assess students, design an intervention plan, implement intervention programs, and evaluate interventions for students with a variety of disabilities. Emphasis will be placed on students in grades 4-12, students with more significant
involvement, and post school functioning.

**SPED 7301 Foundations of Special Education**
This course surveys the foundations of educational programs for students with disabilities, emphasizing the historical, philosophical, and legal aspects of special education. Course work includes surveys of the characteristics and needs of students with various disabilities.

**SPED 7302 Technology in Special Education**
This course will prepare candidates to be better able to respond to individuals’ functional needs in order to enhance their access to the general or special education curricula. Candidates will identify and use technology for instruction, assist students with school related tasks and help students communicate and help students function better in their environment.

**SPED 7305 Managing the Learning Environment**
Theory, research, and application for behavioral management. Current issues and research in applied behavioral analysis and other forms of classroom management; cognitive behavioral and emerging management procedures, emphasis on application of research.

**SPED 7309 Seminar in Special Education**
Prerequisite: Completion of core emphasis course work, graduate standing. This course explores issues of contemporary importance to the profession, affords students the opportunity to engage in scholarly activities and high-level discussions with professors and is the final event in the candidate’s program of study where earlier knowledge becomes integrated and expanded. This course is to be taken in the final six hours of study.

**SPED 7333 Characteristics and Educational Needs of Children with Severe Disabilities**
Intellectual, behavioral, physical characteristics of individuals with severe disabiling conditions; includes models of social management, history of treatment of persons with severe disabilities, major considerations of educational services delivery to such persons.

**SPED 7335 Instructional Methods for Persons with Severe Disabilities**
Fundamentals of systematic data-based instructional skills needed to teach persons with severe disabilities in classroom, community environments.

**SPED 7336 Advanced Instructional Methods for Teaching Persons with Severe Disabilities**
Prerequisite: Special Education 7335 or consent of instructor. Identification of intervention strategies; design of effective programs for teaching age-appropriate, functional living skills to individuals with severe disabilities.

**SPED 7339 Vocational Instruction for Persons with Handicaps**
Vocational programming methods; emphasis on current “best practices” in instruction, program delivery; includes use of supported work model for systematic instruction in integrated community job sites.

**SPED 7340 Trends and Issues in Early Childhood Special Education**
Prerequisite: exceptionality course. Includes state, federal laws governing, regulating early intervention programs; program models used in the field; emphasis on models emphasizing integrating children with disabilities and their peers without disabilities.

**SPED 7351 Assessment and Instructional Design I**
Prerequisites: SPED 7305 and should be taken in conjunction with SPED 7295. The general goal of this course is to build upon the knowledge and skill students have gained regarding the characteristics of a variety of learners with disabilities. Specific emphasis will be placed on developing skills to serve learners with disabilities, identify and evaluate relevant formal and informal assessment strategies that contribute to the identification, placement, and instructional planning for students with learning problems.

**SPED 7352 Assessment and Instructional Design II**
Prerequisites: successful completion of SPED 7351 Assessment and Instructional Design I and SPED 7390, Practicum in SPED. It is required that this course be taken concurrently with SPED 7390 Practicum in SPED. The general goals of this course are to expand upon the knowledge and skills developed in course work and field experiences gained in Assessment and Instructional Design I and to enfold the knowledge and skills into specific implementation for students with various learning problems. Candidates will evaluate various formal and informal assessments for use in curriculum development and adaptation. Particular emphasis will be placed on candidate competency in instructional design and analysis. Candidates will modify and adapt curriculum for inclusive settings.

**SPED 7353 Transition and Life Adjustment**
Prerequisite: SPED 7352 Assessment and Instructional Design II. This course presents information regarding the transition and life adjustment of persons with disabilities. The focus is on the development and implementation of transition plans for adolescents with disabilities and children with more significant disabilities. Candidates will develop mechanisms for self-advocacy development and access to services available to adults with disabilities.

**SPED 7360 Characteristics and Educational Needs of the Severely Emotionally Disturbed**
Serious emotional disturbance and its educational implication; includes significant historical factors; theoretical orientations to definition, etiology of serious emotional disturbance; classification systems; learning characteristics, their educational implications; interdisciplinary appraisal, therapies; federal, state legislation, litigation relating to serious emotional disturbance and education.

**SPED 7361 Methods for Teaching the Seriously Emotionally Disturbed**
Prerequisite: Special Education 7360 or consent of instructor. Instructional principles, intervention strategies; includes major education models; identification of education needs, development of Individualized Education Program; classroom design for self-contained, resource class at elementary, secondary levels; student progress evaluation.
**SPED 7362 Direct Teaching of Social Skills in Children and Youth**
(Oriented to educators.) Contemporary models; emphasis on classroom-based instruction; includes key social learning aspects; social integration; teaching social skills deficits; instructional materials, procedures; language for building comprehensive social skills programming, outcomes evaluation into Individualized Education Programs.

**SPED 7365 Individualized Education Programs**
Prerequisite: graduate standing. Identification, evaluation, perspective programming process in education of exceptional children; includes Arkansas special education general program standards; components of comprehensive, interdisciplinary appraisal; categorical eligibility criteria; referral, placement, appeal procedure; development of Individualized Education Programs, IEP process conferences; report writing.

**SPED 7366 Exceptionalities in the Classroom**
Prerequisite: graduate standing. Recognition of exceptionalities, educational implications; techniques for elementary teacher in identifying exceptionalities in regular classroom. Offered on demand.

**SPED 7390 Assessment in Special Education Practicum**
Prerequisites: SPED 7305. Students are encouraged to take this course concurrently with SPED 7351.
The goal of this practicum is to develop knowledge and skills in assessment techniques unique to Special Education. Students will have opportunities to select, administer, and interpret scores from formal, informal, and criterion referenced tests. Candidates also will engage in specific observational assessments. Emphasis will be placed on translating assessment information into programming recommendations. Students will develop profiles of students with or at risk for developing learning problems and students exhibiting a range of disability characteristics and identifying instructional support suitable for implementing with actual students.

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**STAT – Statistics**

**STAT 7340 Advanced Statistical Methods I**
Prerequisite: A grade of C or greater in MATH 1451 and STAT 3352 or equivalent. This course is designed to cover the more common advanced statistical concepts and methods. Probability theory, collecting data, sampling, inference, interval estimation, tests of hypotheses for single mean, two means, proportions, and the use of computer packages.

**STAT 7341 Advanced Statistical Methods II**
Prerequisite: A grade of B or greater in STAT 7340. This course is designed to cover the more common and advanced statistical concepts and methods. Simple linear regression, multiple linear regression, ANOVA of single factor experiments, ANOVA of multi-factor experiments, non-parametric methods, categorical data analysis, Bayesian decision theory and methods, and the use of computer packages.
STAT 7342 Introduction to SAS
This course is designed to introduce students in all disciplines to conducting data analyses and managing data using the SAS system and SAS programming language. The basics of the SAS language and SAS data sets, reading SAS logs, viewing and printing output, inputting data into SAS, manipulating data and creating new variables using SAS procedures, generating descriptive statistics and frequency distributions using SAS Insight. Performing hypothesis tests and constructing confidence intervals, building categorical models, building and interpreting simple and multiple linear regression models, constructing ANOVA models using SAS procedures and Analyst.

STAT 7343 Programming in SAS
Prerequisite: A grade of B or greater in STAT 7342. This course is designed to introduce students in all disciplines to conducting a deep SAS programming on topics in statistical simulation and computation using the SAS system and SAS programming language. Pseudo-random-variate generation, optimization, Monte Carlo simulation, Bootstrap, and Jackknife methods.

SYEN – Systems Engineering

SYEN 5182 MEMS and Microsystems Laboratory
Prerequisites: SYEN 4376 and 4176, or consent of instructor. This laboratory course is an introduction to the principles of micro-fabrication for microelectronic devices, sensors, and micromechanical structures, MEMS, and microsystems with applications in engineering. Course comprises of laboratory work and accompanying lectures that cover silicon oxidation, photolithography, thin film deposition, etching, electrochemical deposition (plating) and packaging. Some selected topic in yield and reliability, as well as process simulation may be covered. Two hours lab. One credit hour.

SYEN 5199, 5299, 5399, 5499 Special Topics
Prerequisite: Consent of the instructor. Advanced specialized topics of current interest in systems engineering. Topics vary with faculty interest and availability. One, two, three, or four hours lecture. One, two, three, or four hours.

SYEN 5282 Microelectromechanical Systems (MEMS) and Microsystems
Prerequisite: SYEN 3372 or equivalent and corequisite concurrent 5182 or equivalent with a grade of C or better. In this introductory MEMS class, we cover the fundamental basis of microsystems technology. Microelectromechanical devices (MEMS), such as actuators, pressure sensors, and opto-mechanical assemblies, require knowledge of a broad range of disciplines, from microfabrication and mechanics to chemistry and solid state device physics. Three hours lecture. Note: Students enrolled in SYEN 5282 do a project related to course contents. SYEN 5282 is not open to students with credit for SYEN 4282. Two credit hours.

SYEN 5300 Independent Study
Prerequisite: Graduate standing, and consent of the instructor. Individual investigation on entry
level topics by a graduate student. Topics determined in consultation with supervising faculty. Agreement must be in writing and filed with the department chairperson. The student work will be evaluated through reports or other means and documented by the faculty. A maximum of six credit hours of independent study courses, SYEN 5300 and/or SYEN 7300, can be applied toward the degree requirements. Three credit hours.

SYEN 5308 Linux Systems Programming
Prerequisite: CPSC 2376 or equivalent. This course introduces the fundamental structure and services of the Unix/Linux operating systems. Upon completion of this course, the students should master application software and middle-ware design in Unix/Linux operating system through programming at the system call level. It covers files and directories, device control, terminal handling, process and threads, inter-process communication, event-driven and signal handling, pipes, sockets, client/server. It also covers graphics and user interface design. Students who have taken SYEN 4308 for credit cannot take SYEN 5308 for credit. Three credit hours.

SYEN 5310 Introduction to Signal Processing
Prerequisite: MATH 3322 or equivalent. Introduction to the fundamental concepts in signal processing. Use of the fundamental transform techniques (Laplace transform, discrete Fourier transform, z-transform). Discrete time representation of signal, linear time invariant subsystems. Correlation, coherence and time delays, Standard system models (ARMA, ARMAC). FIR and IIR filters. Three hours lecture. Three credit hours.

SYEN 5314 Queuing Theory and Systems
Prerequisite(s): SYEN 3314 or equivalent. The theoretical foundations, models and techniques of queuing theory are presented. Topics include classic models of queues including simple and advanced Markovian queuing models, and models of queues with general arrival and service patterns. Applications of queuing theory and queuing systems design considerations. Three hours lecture. Three credit hours.

SYEN 5315 Advanced Dynamics I

SYEN 5320 Linear Systems Theory
Prerequisites: SYEN 3364 or consent of instructor. Introduction to modem control systems, state-space models of linear time-invariant systems, solution to state equations, linear transformations and canonical forms, stability analysis, controller synthesis via state feedback, tracking system design, observer-based compensator design, optimal control problems. Three hours lecture. Three credit hour.

SYEN 5322 Modeling Transportation Systems
Prerequisite(s): SYEN 3312, SYEN 3314, or Consent of Instructor. The objectives of
transportation analysis are defined to include mobility provision, consequence identification and selection of courses of action. A set of methodologies have evolved to exclusively address transport modeling, including demand forecasting, technology representation, network-flow, and multi-attribute assessment- of performance. This course reviews very powerful tools to analyze such a class of technological and socioeconomic problems, characterized by the explicit recognition of a spatial dimension. Three hours lecture. Three credit hours.

**SYEN 5325 Fuzzy Logic Systems**
Prerequisite(s): SYEN 3364. Introduction, basic concepts of fuzzy logic, fuzzy sets, fuzzy relations, Fuzzy If-Then rules, fuzzy implications and approximate reasoning, fuzzy logic in control theory, hierarchical intelligent control, fuzzy logic applications in information systems, fuzzy model identification, neuro-fuzzy systems and genetic algorithms. Three hours lecture. Three credit hours.

**SYEN 5326 Measurement Techniques**
Prerequisite: SYEN 2315 or equivalent. Principles of operation and implementation of transducers used in electronic measuring systems. Sensors used for the measurement of strength, capacitance, pressure, flow, force velocity, temperature, humidity, vibration, sound, and acceleration are discussed. Interfacing transducers with a digital system will be emphasized. Effects of quantization, scaling, sampling time, and bandwidth will be examined. Two hours lecture and two hours laboratory work. Three credit hours.

**SYEN 5327 Acoustics I**
Prerequisite: MATH 2353 or equivalent. Development of the equations for acoustics and vibrations. Transducers for measurement of sound and acceleration. Design of sonic actuators using network analysis. Analog and digital processing of signals, including spectral analysis, adaptive signal processing, and central analysis. Applications to noise analysis and control and machinery diagnosis through sound.

**SYEN 5329 Robust and Optimal Control**
Prerequisite(s): SYEN 3364, MATH 3312. Linear discrete- and continuous-time systems, state equations, transition matrix, internal stability, Lyapunov stability, controllability, observability, realization, linear feedback, state observation, polynomial fraction description, geometric theory, discrete-time stability, reachability, observability, realization, state feedback and observation. Three hours lecture. Three credit hours.

**SYEN 5331 Advanced Computer Architecture**
Prerequisites: SYEN 3336 or consent of instructor. Introduction to Computer Systems, Instruction-Set architecture, Arithmetic/Logic Unit, Data Path and Control, Memory System Design, I/O Interface, and Advanced Architectures. Three hours lecture. Three credit hours.

**SYEN 5332 Applied Operating Systems**
Prerequisites: SYEN 3362. Introduction to operating systems. Buffering, physical input/output, and file management. Multiprogramming and processing, resource scheduling, memory
management, concept of virtual memory, Process management and scheduling. Device management and scheduling. Process communication, network communication, and protection. The graduate students will use the C language to implement several generic OS components, practice the process management, and practice the shared memory utilities. Three hours lecture. Three credit hours.

**SYEN 5334 Software Systems Engineering**
Prerequisite: SYEN 3362, Engineering approach to the development of software systems, including the life cycle steps of project planning, requirements analysis and specification, design, production, testing, and maintenance of software systems. Students are required to do a project related to course contents, Dual-listed in UALR Undergraduate catalog as SYEN 4334. Not open to students with credit for SYEN 4334. Three hours lecture. Three credit hours.

**SYEN 5335 Mechatronics I**
Prerequisite: MATH 2453 or equivalent, PHYS 2321 or equivalent. This course covers basic mechanical design elements, including gears, fasteners, bearings, sprockets and chains, timing pulleys, brakes and clutches. Methods of attaching power and timing elements to shafts, including standard keys, Woodruff keys, splines, pins, and press-fits, is covered. Integration of sensors, including potentiometers, limit switches, and yaw rate sensors is covered. Theories of failure will be introduced, and basic stress/strain calculations will be done. Design theories and project management will be introduced. Three hours lecture. Three credit hours.

**SYEN 5336 Advances in Communication Networks**

**SYEN 5340 Applied Numerical Methods**
Prerequisite: SYEN 1305; MATH 3312 and 3322. Scientific computing, error analysis, roots of equations, systems of equations, curve fitting, numerical differentiation and integration, ordinary and partial differential equations. Three hours lecture. Three credit hours. Students are required to do a term project related to the contents of the course. Dual-listed in UALR undergraduate catalog as SYEN 4340. Course not open to students with credit for SYEN 4340.

**SYEN 5342 Linear Programming and Network Flows**
Prerequisites: SYEN 3312, or consent of instructor. This course covers salient linear optimization topics, including computational issues such as decomposition, LU factorization, and network flow. Of equal interest is the equivalence between algebraic and graph-theoretic representation of a model and its solution algorithms. The relationship between the network flow paradigm and discrete optimization is also emphasized. Last but not least are the software libraries to solve linear optimization models. Three hours lecture. Three credit hours.
**SYEN 5350 Digital Signal Processing**
Prerequisite(s): SYEN 3350 or consent of the instructor. Signals and signal processing; discrete-time signals and systems in the time and frequency domains; digital processing of continuous-time signals; finite-length discrete transforms; discrete-time signals and systems in the z-domain; LTI discrete-time systems in the transform domain; digital filter structures; IIR digital filter design; FIR digital filter design; DSP algorithm implementation; analysis of finite word-length effects; multi-rate DSP fundamentals; multi-rate filter banks and wavelets; applications of DSP. Three hours lecture. Three credit hours.

**SYEN 5352 Spatial Time Series**
Prerequisite(s): SYEN 3312 or equivalent, STAT 3353 or equivalent, or Consent of Instructor. Instead of a single stream of data, multiple streams gathered over the target can provide better information. Because of the inherent spatial correlation among these data streams, spatial time-series can play an important role in multiple-sensor and other data-intensive applications. Image-processing applications include image rectification and restoration, image enhancement, image classification, and data merging. Signal processing applications include the Spatial-temporal Autoregressive Moving-Average model and Intervention Analysis. Unifying these diverse analyses and applications is Markov Random Field Theory. Three hours lecture. Three credit hours.

**SYEN 5353 Advanced Digital Communications**
Prerequisites: SYEN 3354 or consent of the instructor. This course provides an in-depth examination of wireless digital communication design strategies. Topics covered include digital modulation, radio wave propagation characteristics, signal detection methods, BER performance improvement and simulation techniques, RF/hardware architectures, migration path for modulation and demodulation techniques, signal processing building blocks for wireless systems, methods for mitigating wireless channel impairments, perform system simulations, BER and channel models, predict system performance and evaluate tradeoffs, list TDMA and CDMA techniques, and 3G evolution, describe design issues for wireless systems, particularly those issues in which transmit and receive implementation affect system performance. Three hours lecture. Three credit hours.

**SYEN 5354 Power Systems Analysis**
Prerequisites: SYEN 3358, or consent of the instructor. Fundamental concepts of power system analysis, transmission line parameters, system models, steady-state performance, network calculations, power flow solutions, fault studies, symmetrical components, operation and control. Three hours lecture. Three credit hours.

**SYEN 5355 Mobile Multimedia Internet**
Prerequisites: SYEN 3314, or consent of the instructor. The course will provide state-of-the-art perspective of the emerging landscape of Mobile Multimedia Internet. Key subject areas covered in advanced mobile Internet technologies include WLAN, GPRS, 3G, UTMS, and VoIP. Topics covered will involve architecture of the systems, protocol issues, the design and analysis of solutions for mobility, quality of service, mobile IP, and standardization efforts. Dual-listed in the UALR Graduate Catalog as SYEN 5355. Three hours lecture. Three credit hours. Students with
credit for SYEN 4355 may not take SYEN 5355

**SYEN 5356 Radio Frequency Techniques and Systems**

**SYEN 5358 Cellular and Wireless Communications**
Prerequisite: SYEN 3354. Characteristics of mobile radio environment, multipath and fading, cellular communication concepts, channel allocation and reuse, access and scheduling techniques, system capacity, power control, diversity, coding, modulation in cellular systems, examples of digital wireless systems, wireless local area networks. Three hours lecture. Three credit hours.

**SYEN 5359 Optical Networking**
Prerequisites: SYEN 4355, or consent of the instructor. Fundamental concepts of networking, optical networks elements and devices, SONET, WDM, DWDM, optical control plane, MPLS and GMPLS, Free Space Optical Mesh Networks. Three hours lecture. Three credit hours.

**SYEN 5362 Neural Networks and Adaptive Systems**
Prerequisite(s): SYEN 3312, or consent of the instructor. Introduction to neural networks, neuron models and learning strategies, pattern recognition, multi-layer perceptron, back propagation, principle component analysis, self-organizing feature maps, neural networks for time-series forecasting. Three hours lecture. Three hours lecture. Three credit hours.

**SYEN 5366 Advanced Digital Systems**
Prerequisite(s): SYEN 3330 and SYEN 3310. Advanced design principles for digital systems. In particular, the students will be exposed to hardware modeling in the hardware description language: VHDL (Verilog Hardware Description language), Compilation techniques for hardware models, and logic-level synthesis and optimization techniques for combinational and sequential circuits.

**SYEN 5371 Intro Continuum Mechanics**
Prerequisite: MATH 2453 and MATH 3322 or their equivalent, PHYS 231 and PHYS 3300 or their equivalent. This introductory course on Continuum Mechanics will take a unified approach to train the student in the modeling of deformation in solids, fluid flow, and electrical fields. Using a first principles approach, the fundamental conservation laws of mass, charge, momentum and energy will be covered. Application to deformation in solids, heat transfer, fluid flow and electrical fields will be addressed.
SYEN 5372 Mechatronics II
Prerequisite: SYEN 4335 or equivalent. The combination of classical mechanical design, electronic analysis and design, control engineering, and computer science in the design of complex electric-mechanical-controlled systems. Commonly used sensors (potentiometers, accelerometers) and actuators (stepping motors, DC motors) are studied. Interfacing sensors and actuators to a microcomputer, discrete controller design, and real-time programming for control using the C programming language. There is a significant out-of-class project exercise associated with this course. Three hours lecture. Three credit hours.

SYEN 5375 Mechanical Vibrations
Prerequisites: SYEN 3370, or consent of the instructor. Analysis of linear multi-degree of freedom systems. Lagrangian formulation, model analysis, lumped parameter analysis of discrete systems, and continuous system vibrations. Introduction to non-linear systems. Three hours lecture. Three credit hours.

SYEN 5381 Thermal and Fluid System Design
Prerequisite: SYEN 4379 or consent of the instructor. Overview of fossil fuel, nuclear and renewable-energy power plants, the Rankine cycle, fossil fuel steam generators, fuels and combustion, pumps and turbines, the condensate-feed-water system, the circulating-water system, gas turbine and combined cycles, principles of nuclear energy, nuclear reactors and power plants, geothermal energy, solar energy, wind energy, energy from the oceans, energy storage and fuel cells, environmental aspects of power generation. Three hours lecture. Three credit hours.

SYEN 5383 Finite Element Analysis
Prerequisite: SYEN 3378, 4376, and 4340 (recommended). Basic concepts of the finite element method (FEM); stiffness matrices, spring and bar elements; truss structures, the direct stiffness method; flexure elements; method of weighted residuals; interpolation functions for general element formulation; applications in heat transfer, fluid mechanics, and solid mechanics; structural dynamics. dual-listed in the Undergraduate Catalog with SYEN 5383, Three hours lecture. Three credit hours.

SYEN 5384 Computer Methods in Fluids and Heat Transfer
Prerequisite: SYEN 4374 or equivalent. Modeling and simulation of thermal-fluid problems using commercial software, finite volume method, solution algorithms for pressure-velocity coupling, solution of systems of discretized equations, unsteady flows, uncertainty in CFD modeling, methods for dealing with complex geometries, modeling of combustion, heat transfer, and unsteady flows. Three hours lecture. Three credit hours.

SYEN 5389 Professional Engineering Licensure
Prerequisite concurrent: Registration for the Fundamentals of Engineering exam, or consent of instructor. Legal, regulatory, and ethical issues related to the practice of engineering; preparation for engineering licensure examinations. Two hours lecture. Three hours lab. Three credit hours. Cross listed as CNMG 5389. Dual-listed in the UALR Undergraduate Catalog as CNMG 4389.
Students cannot receive graduate credit for SYEN 5389 if they have previously taken SYEN 4389.

**SYEN 7101 Research Methodology**
Prerequisite: Graduate standing. A one-credit course in a set of three, introducing students to the research methodology of doctoral level research. Research examples will be drawn from work that exemplifies the interconnecting research opportunities across the computing and engineering disciplines.

**SYEN 7102 Research Tools**
Prerequisite: Graduate standing. A one-credit course in a set of three, introducing students to the research tools of doctoral level research. Research examples will be drawn from work that exemplifies the interconnecting research opportunities across the computing and engineering disciplines.

**SYEN 7103 Research Applications**
Prerequisite: Graduate standing. A one-credit course in a set of three, introducing students to examples of doctoral level research. Research examples will be drawn from work that exemplifies the interconnecting research opportunities across the computing and engineering disciplines.

**SYEN 7118 Research Ethics in Science and Engineering**
The course uses a case-based method to cover various topics related to professional research ethics. It is intended for entering science and engineering graduate students in the Donaghey College of Engineering and Information Technology (DCEIT). The purpose of the course is to familiarize students with professional ethics related to research and to prepare them to deal with typical ethical situations that may occur in the course of their graduate studies and professional careers.

**SYEN 7145 Integrated Comp. Lab Rotation**
First semester orientation course to allow new students in the Integrated Computing doctoral program to gain exposure in several different faculty research areas. This course will aid the student in the selection of his/her doctoral research advisor. 1 credit hour. Offered on demand. Cross listed between Computer Science, Systems Engineering, and Information Science.

**SYEN 7190 Systems Engineering Seminar**
Prerequisites: Graduate standing and consent of the graduate advisor. Students, faculty, and invited speakers will present, discuss and exchange ideas on research topics related to Systems Engineering. One-hour session per week. Course may be repeated for credit. Graded: credit/no credit.

**SYEN 7192 Graduate Seminar**
Prerequisites: Graduate standing, consent of graduate coordinator. Students, faculty, and invited speakers will present discuss and exchange ideas on research topics of general interest to the graduate programs in the EIT college. One-hour session per week. Course may be repeated for credit. Graded: credit/no credit.
SYEN 7300 Independent Study
Prerequisite: Completion of core course requirements in the graduate program, and consent of the instructor. Individual research investigation by a graduate student. Topics determined in consultation with supervising faculty. Agreement must be in writing and filed with the department chairperson. The student work will be evaluated through reports or other means and documented by the faculty. A maximum of six credit hours of independent study courses, SYEN 5300 and/or SYEN 7300, can be applied toward the degree requirements. Three credit hours.

SYEN 7302 Advanced Electronics for Instrumentation
Principles of operation of analog and digital integrated circuitry, including amplifiers, A/D and D/A circuits, active filters and special function circuits as used in computers and instrumentation for measurement and control.

SYEN 7306 Real-time Embedded Systems
This course presents technologies for the design and implementation of embedded systems using Linux Operating System (OS). Such technologies include Linux, real-time Linux OS, and real-time embedded application design. Students will learn how to administer Linux OS and how to create a task-specific kernel for their own embedded application. They will learn techniques necessary for developing real-time Linux device drivers, real-time kernel space programming, and inter-process communication between real-time kernel and user space. Students will obtain hands-on experience with embedded software design through course projects. Upon completing this course, students should be able to develop their own embedded applications based on open source software resources.

SYEN 7307 Smart Materials
Prerequisite: SYEN 4371 or equivalent. This course will deal with the unique nonlinear, hysteretic response of smart materials that arise due to coupling between mechanical and thermal or electric or magnetic fields. Specifically, microstructural characteristics and constitutive modeling of shape memory alloys, ferroelectric materials and ferromagnetic materials will be covered. Use of these smart materials in sensor and actuator design will be addressed.

SYEN 7310 Economic Evaluation of Engineering Projects
Prerequisite(s): Math 1453, SYEN 3312 and 3314 or their equivalents, or consent of the instructor. Application of engineering management decision making to the life-cycle economic evaluation of engineering projects. Topics include decisions regarding investment in new or existing facilities and improvement of processes in both manufacturing and service industries. Deterministic, stochastic and multi-attribute evaluation approaches with the objectives of profit and utility maximization, as well as cost and risk reduction techniques are explored. Three hours lecture. Three credit hours.

SYEN 7311 System Design and Analysis
Prerequisite(s): Graduate standing or consent of the instructor. This course introduces the concept of a system, system requirements, system life cycle, design and integration. The basic principles of system engineering design process, modeling, and process modeling. Basic concepts
of system requirements and definition of the design problem will be presented. The details of functional, physical, and operational architectures will be presented. The details of interface design, integration, and qualification of the system will be presented. Three hours lecture. Three credit hours

SYEN 7312 Systems Architecture and Design
Prerequisites: SYEN 7311 or consent of the instructor. This course introduces the process of systems architecting and the design for operational feasibility in the context of systems engineering design process. Systems architecture topics include the functional, physical, operational, and interface architectures and their correlation with the system design process, as well as graphical modeling techniques to develop these types of architectures. Examples of standardized architecture frameworks used in practice are also presented. The design for operational feasibility includes quantitative and qualitative aspects in reliability, maintainability, productibility, supportability, disposability and affordability as they relate to the system engineering life-cycle design process. Three hours lecture. Three credit hours.

SYEN 7313 Systems Management and Evaluation
Prerequisite: Graduate standing and consent of the instructor. Organized in two parts, this course presents the fundamental concepts of systems management and evaluation. Systems management methodologies, such as Systems Engineering Management Plan, Work Breakdown Structure and Risk Management Plan are presented in the first part of the course. As the design and development of any engineering system is basically an engineering project, the second part of the course introduces the steps in the engineering project management process, Quantitative project management techniques, such as Program Evaluation and Review Technique, and Critical Path Method are presented in detail. Three hours lecture. Three credit hours.

SYEN 7314: Multi-criteria Decision and Risk Analysis
Prerequisite: Graduate standing. The purpose of this course is to expose the student to a wide variety of techniques in handling Multi-criteria Decision Making (MCDM) problems. The emphasis will be placed on breadth rather than depth. The students will analyze an MCDM problem of their choice. S/he will work with the decision-maker(s) to define the problem (particularly the criteria with which s/he uses to measure `success,`) generate alternatives, capture the preference structure of the decision maker(s), and evaluate the alternatives, resulting in preferred courses of action. The student will get the opportunity to use Multi-attribute-decision-analysis and Multi-criteria-optimization computer-software. Three credit hours.

SYEN 7315 Complex Engineered Systems
Prerequisite(s): SYEN 3312 and 3362 or their equivalents, or consent of the instructor. Introduction to complex engineered systems and the methods and tools currently under consideration in the ongoing research towards better understanding of such systems and the development of a complex engineered systems theory. Topics include concepts such as emergence, self-organization, learning and adaptation, and various quantitative and computational intelligence techniques that are considered for modeling, analysis and evaluation of such systems. System-of-systems concept is also presented. Three hours lecture. Three credit
SYEN 7316 Advanced Systems Simulation
Prerequisite(s): SYEN 3312 and 3316 or equivalent, or consent of the instructor. Simulation of existing or proposed real-world systems (facilities and processes). Topics include simulation input modeling, random variant generation and stochastic models of arrival processes, statistical analysis of simulation output, variance reduction techniques, statistical design of simulation experiments and optimization of the simulation output. Monte Carlo simulation on spreadsheets, including project management, risk analysis, and reliability applications. Three hours lecture. Three credit hours.

SYEN 7317 Nanostructural Materials: Physical and Chemical Properties
Prerequisites: SYEN 3372 or PHYS 4340 or CHEM 4340 or equivalent. This course introduces students to the area of nanotechnology and the novel properties of the materials built at the nanoscale. The course will cover the main properties of nanomaterials, various methods for synthesis and characterization and the most up-to-date applications from nanoelectronics, advanced materials, bio-medicine, etc. The course is designed for graduate students with a background in chemistry, physics, and engineering.

SYEN 7318 Micro- and Nano-Fabrication
Prerequisites: Consent of instructor. This course will introduce some of the important micro- and nano-fabrication techniques that are mostly used in areas of microelectronics and nanotechnology. Some of the topics that will be covered include diffusion of impurities, thermal oxidation, ion implantation, optical lithography, thin film deposition, etching, nanolithography, nano-imprinting, growth of nanorods and nanosprings by glancing angle deposition, and growth of carbon nanotubes. During the course, students will become familiar with some of the basic experiments including thin film and glancing angle depositions, etching, and film characterization techniques. The course is intended for graduate students from science and engineering majors.

SYEN 7320 Linear Systems Theory
Prerequisites: SYEN 5320 or consent of instructor. This course covers the mathematical basis of linear state-space systems theory. Topics include: linear time-varying and time-invariant system representation, solutions to LTV and LTI systems, stability analysis, controllability and state feedback, observability and output feedback, minimal realizations, MIMO systems, and LQR/LQG optimal control. Three hours lecture. Three credit hours.

SYEN 7331 Transducers and Real Time Control
Prerequisites: SYEN 4335 or equivalent, SYEN 7302, SYEN 1302 or equivalent. Applications of computer techniques for data acquisition, analysis, and real-time control; use of analog-to-digital, digital-to-analog, digital I/O for measurement; C computer language for experiment control; use of standard transduction elements for physical measurements such as position, velocity, acceleration, and force.

SYEN 7332 Advanced Operating Systems Design
Prerequisites: SYEN 5332 or consent of instructor. Design principles of modern schedulers, multi-processor systems, protection and security components, OS tools, and IP stacks. The graduate student will do several projects through the software engineering cycles of requirement analysis, high level design (HLD), detailed design (DD), implementation, unit testing, and system testing. The projects include but not limited to the Linux scheduler, signal handler, shared memory control, virtual memory management, and case studies of device drivers. Three hours lecture. Three credit hours.

**SYEN 7342 Network and Combinatorial Optimization**
Prerequisites: SYEN 5342 or consent of the instructor. An in-depth study of combinatorial programming and network flow optimization. Emphasis on discrete optimization and specialized solution techniques that are efficient way to solve mixed-integer programming problems. Techniques include minimum cost flow, networks with gain, multi-commodity flow networks, networks with side constraints and Lagrangian relaxation. Computational complexity is also discussed. Three hours lecture. Three credit hours

**SYEN 7355 Statistical Signal Processing**

**SYEN 7357 Advanced Antennas for Wireless Systems**
Prerequisite: SYEN 3356 or consent of the instructor. The course introduces the fundamental principles of antenna theory and applies them to particular antennas for wireless communications systems and other advanced antenna systems. In addition, the course develops appreciation for research issues of antennas for mobile wireless and advanced communications systems. The course is useful in the areas of mobile communication, signal processing, antenna theory, and smart antennas. It provides the current state of antenna array research and describes how an antenna array may be used to help meet the ever-growing demand of increased channel capacity for wireless mobile communications services. Three hours lecture. Three credit hours.

**SYEN 7374 Elasticity**
Prerequisites: SYEN 4376 or ASCI 5320 or consent of the instructor. Fundamental concepts of stress and strain. Linear theory: boundary value problems of elasticity including plane stress, plane strain, and torsion, elementary variation theory of elasticity, Three hours lecture. Three credit hours.

**SYEN 7376 Fracture Mechanics**
Prerequisites: SYEN 7374, or consent of the instructor. Failure of manufactured products in service and implications for design; energy release rates, toughness, and evaluation of experimental tests; fracture mechanisms in different material systems; fracture toughness testing; damage tolerance; design studies. Three hours lecture. Three credit hours.
SYEN 7385 Systems Engineering Graduate Project  
Prerequisites: Graduate standing and consent of the student’s graduate advisor. Students, under faculty supervision, will conduct directed research on a particular problem or area of Systems Analysis and Applications/Electrical and Computer Engineering/Telecommunication and Signal Processing/ Mechanical Engineering in some depth, and will produce an appropriate project report based on his/her investigations.

SYEN 7399 Special Topics in Systems Engineering  
Prerequisites: Graduate standing and consent of the instructor. Advanced topics in the area of Systems Analysis and Applications/Electrical and Computer Engineering/Telecommunication and Signal Processing/ Mechanical Engineering. Three hours lecture. Three credit hours.

SYEN 8100-8600 Systems Engineering Master’s Thesis  
Prerequisites: Graduate standing and consent of the thesis advisor. Scholarly investigation of a selected problem in the area of Systems Analysis and Applications/Electrical and Computer Engineering/Telecommunication and Signal Processing/ Mechanical Engineering culminating in a written, orally defended thesis. Maximum of six hours may be applied toward MS degree. Variable credit of one to six hours.

SYEN 9100-9900 Doctoral Research/Dissertation  
Prerequisites: Consent of Advisor. One to nine credit hours to be determined at the time of registration. Cross listed between Computer Science, Systems Engineering, and Information Science.

TCED – Teacher Education

TCED 5100, 5200, 5300 Workshop  
Prerequisite: consent of instructor. Exploration of areas of interest, preparation of educational materials. Offered on demand

TCED 7149, 7249, 7349 Independent Study  
Prerequisite: consent of instructor. Individual problems in student’s chosen field. Up to three hours may count toward degree. Offered on demand.

TCED 7303 Reflective Teaching  
For certified secondary teachers in the advanced track M.Ed. Students learn to use tools of reflective teaching to assess their own level of competence and to design learning experiences to improve their own classroom teaching. Students will analyze various national models for assessment of master teachers and will examine recent research in education which should affect classroom practice. With the guidance of the instructor they will demonstrate their current level of competence in a portfolio and will select a committee to develop an individualized degree plan.

TCED 7305 Action Research
This course introduces Action Research to graduate students. Focus is on understanding the process of action research and how it differentiates from traditional research and its processes. Topics include identifying potential topics within the classroom, implementing alternative solutions, evaluating and presenting the outcomes, and dissemination of findings through appropriate channels.

**TCED 7321 Teaching Culturally Different Children**
Problem, potential of children from culturally different backgrounds; preschool, elementary programs designed to meet their needs; guest lecturers are a basic part of the program.

**TCED 7327 Contemporary Curriculum Design**
(For teachers, supervisors, and administrators in developing clear concepts about all children and their educational programs.) Philosophy, administration, techniques of curriculum design; includes participation in development of a culturally pluralistic curriculum. Offered in spring.

**TCED 7333 Mentoring and Coaching Teachers**
This course prepares teachers to work as mentors/coaches of pre-service and/or in-service teachers and as leaders in professional development.

**TCED 7337 Life Adjustment for Persons with Severe Disabilities**
Overview of the life adjustments encountered by older adolescents and young adults with severe disabilities and their families. Concentrations include philosophies of service delivery, residential and occupational alternatives for adults with severe disabilities, social needs, and legal rights and responsibilities. Emphasizes community-based services for individuals with severe disabilities.

**TCED 7341 Conflict Management in the Schools**
Conflict management issues and strategies in the schools. School-community disputes, faculty relations, parental conflicts, and student conflicts are addressed. Participants are trained in a variety of approaches to school safety, school community building, and methods of resolving conflict including peer mediation. Diversity issues discussed throughout the course.

**TCED 7600 Science, Mathematics, and Reading: An Interdisciplinary Approach K-4**
Prerequisite: consent of instructor. The learning of science, mathematics, and reading as active, integrated, constructive processes involving experimentation, investigation, communication, reasoning, and problem solving; shows connections and relevant applications of these disciplines; goals include helping teachers extend content learning, helping teachers create successful learning environments for every student through use of manipulatives, calculators, science equipment, and various learning strategies; and the provision of access to appropriate materials, equipment, and technology.

**TCED 8115-8118 Studies Affecting Elementary Education**
Current research, trends in elementary education; emphasis on interdisciplinary studies; topics reviewed regularly. Offered in fall and summer.
Graduate Courses - 2015-2016 Graduate Catalog

**TCED 8150-8650 Specialist Thesis**
Preparation of the specialist thesis. Offered on demand.

**TCED 8300, 8600 Thesis**
Prerequisite: 24 graduate hours. Preparation of master’s thesis. Offered on demand.

**TCED 8301 Curriculum Design and Evaluation**
Historical, current curriculum design models; needs assessment, process, product evaluation of curriculum development. Offered in fall.

**TCED 8310 Professional Experience**
Professional experience in selected school district, state agency, or university sites related to student’s long-term professional goals; requires a paper related to the experience. Offered in fall and spring.

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**TDHH – Teaching Students who are Deaf or Hard of Hearing**

**TDHH 5301 Foundations of Education for Deaf and Hard of Hearing Students**
This foundations course is a broad-based introductory course to the profession of teaching students who are deaf or hard of hearing. This course articulates the historical background, philosophical approaches, and current trends, problems, and issues in the education of the deaf and hard of hearing. An overview of the psychological, emotional, and educational problems of the deaf and hard of hearing is included. Knowledge of contemporary educational processes and programs for deaf or hard of hearing infants, children, and adolescents are incorporated into the course content. Dual-listed in the UALR Undergraduate Catalog as TDHH 5301. Three credit hours.

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**THEA – Theatre**

**THEA 5140, 5240, 5340 Special Topics in Theatre Arts**
Topics may include plays, playwrights, theatrical periods, styles, production methods; emphasis on directed readings, research, casebook studies. Content changes each time offered. Offered on demand.

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**TINV-Technology Innovation**

**TINV 5301 Strategies for Innovation**
Prerequisites: Junior or senior standing (TINV 4301) or graduate standing (TINV 5301). This course examines strategies for developing innovative products. Topics include how to choose promising problems that are ripe for innovative solutions, how to generate multiple ideas for solving these problems, how to select the most promising solutions and how to sell your solution to potential partners, managers and investors. This is a hands-on project-based course.
**TINV 5303 Applied Innovation Project**

Prerequisites: TINV 4301 / 5301, MGMT 4361 / 5361 and MGMT 4383/5383. The purpose of this course is to give students experience in developing a prototype product in their chosen technological inventions and introduces students to commonly used design tools. It is open to students in any field of science and technology. This is primarily a laboratory class that requires a substantial time commitment. In addition to the activities listed above, students enrolled in TINV 5303 will need to prepare a Prototype User Evaluation Report that documents how potential users of the innovation evaluate the prototype.
Administration and Staff

The University of Arkansas at Little Rock is a part of the University of Arkansas System and governed by the Board of Trustees.

The structure of the university has changed. Refer to the Chancellor’s University Restructuring website for additional information.

<table>
<thead>
<tr>
<th>University of Arkansas System</th>
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<tbody>
<tr>
<td>Donald R. Bobbitt, President</td>
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<tr>
<th>Board of Trustees</th>
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<tbody>
<tr>
<td>Ben Hyneman, Chairman</td>
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<tr>
<td>Reynie Rutledge, Vice Chairman</td>
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<tr>
<td>David Pryor, Secretary</td>
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<tr>
<td>Morrill Harriman, Assistant Secretary</td>
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<tr>
<td>Stephen Broughton, M.D.</td>
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<tr>
<td>C.C. “Cliff” Gibson III</td>
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<td>John Goodson</td>
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<td>Jane Rogers</td>
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<td>Jim Von Gremp</td>
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<td>Mark Waldrip</td>
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<tr>
<th>University of Arkansas at Little Rock Board of Visitors</th>
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<tr>
<td>Dr. D. Dean Kumpuris, Chair</td>
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<tr>
<td>Mark Doramus, Secretary-Treasurer</td>
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<td>John Bailey</td>
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<td>Kevin Crass</td>
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<td>Thomas Dickinson</td>
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<td>H. James Engstrom, III</td>
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<td>Jay Hartman</td>
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<td>Janet Jones</td>
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<tr>
<td>Dr. Andrew Kumpuris</td>
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<td>Jerry C. Jones</td>
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<td>Lewis May</td>
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<td>Sarah McBroom</td>
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<td>Lisenne Rockefeller</td>
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<td>Danyelle Walker</td>
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<th>Foundation Board of Directors</th>
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<tr>
<td>John A. Dominick, Jr., Chair</td>
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<tr>
<td>Sharon S. Bailey ‘01</td>
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<td>Sheila Castin ‘89</td>
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<td>Donna Cone ‘77</td>
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<td>Scott Copas</td>
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<td>Troy Duke ‘03</td>
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<td>J. Bradford Eichler ‘91</td>
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<tr>
<td>Joseph C. Fox ‘02</td>
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<td>Jay C. Hartman ‘99</td>
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<tr>
<td>Bryan E. Hosto ‘85, ’88</td>
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<td>Jane McKinney ‘70</td>
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<td>Cristina S. Monterrey</td>
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<td>J. Don Overton</td>
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<td>Wade Partridge</td>
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<td>David J. Rainwater</td>
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<td>Bill Roehrenbeck</td>
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<td>Martha Ann Sawrie Stephenson</td>
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<td>Jay T. Taylor</td>
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<td>Sam Walls, Jr.</td>
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Edmond G. Hurst ’93
Kevin Lamb
E. Fletcher Lord, Jr.

Rebecca Ward, Ex-officio
Jay K. White
Michael A. Williams, Sr.
Jane M. Yocum

Alumni Association Board of Directors

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Angela E. Thomas ’04
Rebecca F. Ward, LCSW ’79
Troy Wells ’79
Helaine R. Williams ’00
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Office of the Chancellor

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Priscilla McChristian, Chief of Staff
Sandra Robertson, Director of Budget, Planning, and Institutional Research

Office of the Development

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Christian O’Neal, Executive Director of Alumni Relations
Judy Williams, Executive Director of Communications

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Christina Drale, Associate Vice Chancellor for Academic Affairs
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Oliver Brown, Director of Donaghey Student Center
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Rikki Turner, Director of Housing
Linda Barker, Director of Educational Talent Search (TRIO)
Brad Patterson, Assistant Vice Chancellor for Testing Services and Student Life Research
Brenda Thomas, Manager of the Bookstore (Barnes & Noble)

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Carlia Smith, Director of Financial Aid
Katie Young, Director of Admissions
Malissa Mathis, Director of the Office of Transfer Student Services
Tugrul Polat, Director of International Student Services

Office of the Vice Chancellor for Finance and Administration

Charles Cansler, Vice Chancellor for Finance and Administration
Chaundra L. Hall, Associate Vice Chancellor for Finance
David Millay, Associate Vice Chancellor for Finance and Administration
Charles Azebeokhai, Director of Human Resources
Allen Stanley, Contract Review Manager
Regina Wade-Carter, Director of Public Safety
Nathan Nolen, Director of Information Services
## Index of Faculty

The following is an alphabetical listing of our faculty.

◊ signifies graduate faculty standing.

### -A-

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Affiliations</th>
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</thead>
<tbody>
<tr>
<td>Adams, Alois J. ◊</td>
<td>Associate Professor of Physics</td>
<td>A.B., Ph.D., University of Dallas</td>
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<tr>
<td></td>
<td></td>
<td>Ph.D., University of Florida</td>
</tr>
<tr>
<td>Agarwal, Nitin ◊</td>
<td>Associate Professor of Information Science</td>
<td>B.Tech., Indian Institute of Information Technology</td>
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<tr>
<td></td>
<td></td>
<td>Ph.D., Arizona State University</td>
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<tr>
<td>Akhnoukh, Amin K.</td>
<td>Associate Professor of Civil and Construction Engineering</td>
<td>B.S., Cairo University</td>
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<td></td>
<td></td>
<td>M.S., Kansas State University</td>
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<td>Ph.D., University of Nebraska-Lincoln</td>
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<tr>
<td>Allen, Ferris W. S.</td>
<td>Assistant Professor of Voice</td>
<td>B.Mus., Oberlin College</td>
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<td></td>
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<td>M.Mus., The Juilliard School</td>
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<td>D.Mus., Indiana University</td>
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<tr>
<td>Al-Rizzo, Hussain M. ◊</td>
<td>Associate Professor of Systems Engineering</td>
<td>BSc, MSc, Mosul University</td>
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<td></td>
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<td>Ph.D., University of New Brunswick.A.B.</td>
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<tr>
<td>Al-Shukri, Haydar J. ◊</td>
<td>Professor of Applied Science</td>
<td>Chairperson, Department of Applied Science</td>
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<tr>
<td></td>
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<td>B.Sc., M.Sc., Baghdad University</td>
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<td>Ph.D., St. Louis University</td>
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<tr>
<td>Ali, Nawab</td>
<td>Associate Professor of Graduate Institute of Technology</td>
<td>B.S., M.Sc., M.Ph., Ph.D., Aligarh University</td>
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<tr>
<td>Amrhein, Laura M. ◊</td>
<td>Associate Professor of Art History</td>
<td>B.A., James Madison University</td>
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<td>Ph.D., Virginia Commonwealth University</td>
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<tr>
<td>Anderson, Charles M. ◊</td>
<td>Professor of Rhetoric and Writing</td>
<td>B.A., Texas Lutheran College</td>
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<td>MACT, University of Tennessee</td>
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<tr>
<td>Anderson, Gary T. ◊</td>
<td>Professor of Applied Science</td>
<td>B.S., Rice University</td>
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<td></td>
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<td>M.S., Ph.D., University of Texas at Austin</td>
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<tr>
<td>Anderson, Joel E. ◊</td>
<td>Professor of Political Science</td>
<td>Chancellor</td>
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<td>B.A., Harding College</td>
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<td>M.A., American University</td>
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<td>Ph.D., University of Michigan</td>
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<td>Anson, Edward M. ◊</td>
<td>Professor of History</td>
<td>B.A., Drake University</td>
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<td>Ph.D., University of Virginia</td>
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<td>Atcherson, Samuel ◊</td>
<td>Associate Professor of Audiology</td>
<td>B.S.Ed., University of Georgia</td>
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<td>M.Ed., University of Georgia</td>
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<td>Ph.D., University of Memphis</td>
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<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Affiliations</th>
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<tbody>
<tr>
<td>Bacot, Hunter ◊</td>
<td>Professor of Public Administration</td>
<td>B.A., University of North Carolina</td>
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<td></td>
<td>M.P.A., University of North Carolina at Charlotte</td>
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<td>Ph.D., University of Tennessee</td>
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<tr>
<td>Berleant, Daniel ◊</td>
<td>Professor of Information Science</td>
<td>B.S., Massachusetts Institute of Technology</td>
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<tr>
<td></td>
<td></td>
<td>M.S., Ph.D., University of Texas at Austin</td>
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<tr>
<td>Berry, Brian ◊</td>
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</tbody>
</table>
Bailey, Janet L. ◊
Professor of Management
B.B.A., University of Texas Pan-American
Ph.D., University of North Texas

Bain, Ann B. ◊
Professor of Nursing/Dean, College of Education and Health Professions
B.S.N., M.S., University of Central Arkansas
Ed.D., University of Arkansas at Little Rock

Bakr, Mamdouh M., PE ◊
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B.S., Cairo University
M.S., Ph.D., Purdue University

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B.S., Ball State University
M.A., Ph.D., University of Chicago

Baltosser, William H. ◊
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M.S., Ph.D., New Mexico State University

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B.S., Baker University
M.S., Kansas State University
Ph.D., The Ohio State University

Barnes, Amy
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B.A., Arkansas Tech University
M.A., University of Arkansas at Little Rock

Barrett, T. Greg ◊
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B.A., Emory University
M.B.A., Georgia State University
M.A., Ph.D., University of Michigan

Barrio-Vilar, Laura ◊
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B.A., Universidad de Santiago de Compostela
M.A., Ph.D., University of Kentucky

Bayrak, Coskun ◊
Professor of Computer Science
B.S., Slippery Rock University
M.S., Texas Technical University
Ph.D., Southern Methodist University

Belford, Bob
Associate Professor of Chemistry Education
Ph.D., Arizona State University

Assistant Professor of Organic Chemistry
B.S., M.S., Ph.D., University of Arkansas at Little Rock

Bhattacharyya, Abhijit◊
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B.T., Indian Institute of Technology, India
M.S., Ph.D., Rutgers University

Biris, Alexandru S.◊
Professor of Systems Engineering
B.S., M.S., University of Cluj – Napoca
Ph.D., University of Arkansas at Little Rock

Blacklock, James R.◊
Professor of Construction Management
B.S.C.E., Texas A & M University
M.S.C.E., Southern Methodist University
Ph.D., University of Arizona

Blevins-Knabe, Belinda◊
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B.A., Ph.D., University of Texas

Boateng, Kwasi◊
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M.A., Ph.D., Ohio University

Boury, Robert W.◊
Professor of Music
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M.M., D.M.A., University of Michigan

Briscoe, David L. ◊
Professor of Sociology
B.A., M.A., University of Arkansas at Little Rock
Ph.D., Southern Illinois University at Carbondale

Brown, Nickole ◊
Assistant Professor of English
B.A., University of Louisville
M.F.A., Vermont College of Fine Arts

Bruhn, Russell E. ◊
Professor of Information Science
B.S., University of Wisconsin, Stevens Point
B.S., Bemidji State University
M.S., Iowa State University of Science and Technology
Ph.D., Washington State University

Burgin, John S. ◊
Associate Professor of Early Childhood Education
B.A., Hendrix College
M.S., Ed.S., Indiana University
Ph.D., University of Arkansas at Fayetteville

Bush, John M., IV ◊
Associate Professor of Biology
Chairperson of Biology Department
B.S., M.S., Louisiana Tech University
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Academic Background</th>
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</thead>
</table>
| Bell, Joseph R.         | Associate Professor of Management | B.A., Bloomburg University  
MB.A., Michigan State University  
JD, T. M. Cooley Law School |
| Bell-Tolliver, LaVerne  | Associate Professor of Social Work | B.A., Drury College  
M.A., Dallas Theological Seminary  
M.S.W., University of Arkansas at Little Rock  
Ph.D., Texas Woman’s University |
| Bush, Keith             | Assistant Professor of Computer Science | B.S.E., University of Pennsylvania  
M.S., Ph.D., Colorado State University |
| Byrne-McCollum, Jamie M.| Professor of Mass Communications | B.S., M.S., Murray State University  
Ph.D., Pennsylvania State University |
| Carenbauer, Michael     | Professor of Music            | B.A., Berklee College of Music  
B.A., Bowdoin College  
M.A., M.M., University of South Florida |
| Carmack, Jeffrey        | Instructor of Nursing         | B.S.N., University of Arkansas at Little Rock |
| Carr, James K.          | Professor of Construction Management | B.S.E., Clarion State College  
M.S., University of Oklahoma |
| Cates, Kevin            | Associate Professor of Art    | B.A., M.A. University of Arkansas at Little Rock  
M.F.A., University of Memphis |
| Cellitti, Mirtha Anarella| Associate Professor of Teacher Education | B.A., Instituto Universitario Pedagogico de Caracas  
M.A., University of Houston M.A.,  
Ph.D., University of South Carolina |
| Chan, Yupo              | Professor of Systems Engineering | B.S., M.S., Ph.D., Massachusetts Institute of Technology |
| Cheatham, Rosalie M.    | Assistant Professor of French | B.A., University of Arkansas at Little Rock  
M.A., University of Illinois |
| Chen, Tar-Pin           | Professor of Physics          | B.S., Chung Yuan University  
MS, University of Waterloo  
Ph.D., State University of New York |
| Collier-Tenison, Shannon| Associate Professor of Social Work / BSW Program Coordinator | B.A., Hendrix College  
M.S.W., Ph.D., Washington University |
| Connelly, Jeffrey B.    | Chairperson, Department of Earth Science | Professor of Earth Science  
B.A., College of Wooster  
M.S., Bowling Green State University  
Ph.D., University of Tennessee |
| Copeland, Nita J.       | Senior Instructor in Health, Human Performance & Sport Management | B.A., M.A.T., Harding University |
| Corwyn, Robert F.       | Professor of Psychology      | B.A., M.A., University of Arkansas at Little Rock  
Ph.D., Memphis University |
| Cox, Earnest L.         | Associate Professor of Rhetoric and Writing | B.A., M.A., University of Arkansas at Little Rock  
Ph.D., Texas Christian University |
| Craw, Michael C.        | Assistant Professor of Public Administration | B.A., West Virginia University  
M.Phil., Massey University  
Ph.D., Indiana University |
| Crisp, Catherine        | Associate Professor of Social Work | B.A., Rutgers University in New Jersey  
MSW, University of Kansas  
Ph.D., University of Texas |
<p>| Crisp, Sally C.         | Senior Instructor in Rhetoric and Writing |</p>
<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Department</th>
<th>Institution(s)</th>
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<tbody>
<tr>
<td>Chiang, Chia-Chu</td>
<td>Professor of Computer Science</td>
<td>B.A., University of Arkansas at Little Rock&lt;br&gt;M.A., University of Arkansas, Fayetteville&lt;br&gt;Ed.D., University of Arkansas at Little Rock</td>
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<tr>
<td>Clemons, Karina</td>
<td>Assistant Professor of Education</td>
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<tr>
<td>Clifton, Thomas G.</td>
<td>Interim Chairperson, Department of Art</td>
<td>B.F.A., Moorhead State University&lt;br&gt;M.F.A., Savannah College of Art and Design</td>
</tr>
<tr>
<td>Chiang, Chia-Chu</td>
<td>Assistant Professor of Computer Science</td>
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<tr>
<td>Daily, Cynthia M.</td>
<td>Associate Professor of Accounting</td>
<td>B.A., M.B.A., Henderson State University&lt;br&gt;D.B.A., Louisiana Tech University</td>
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<tr>
<td>Darsey, Jerry A.</td>
<td>Professor of Chemistry</td>
<td>B.S., Ph.D., Louisiana State University</td>
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<tr>
<td>Davidson, Elizabeth Sloan</td>
<td>Assistant Professor of Nursing</td>
<td>A.D.N., Arkansas State University-Beebe&lt;br&gt;B.S.N., Florida Hospital College of Health Sciences&lt;br&gt;M.S.N., Walden University</td>
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<td>B.S., The University of the South</td>
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| Levernier, James A. | Professor of English                            | B.A., Mankato State University  
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JD, Loyola School of Law |
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<td>B.A., Little Rock University, M.S.E., Henderson State College, Ed.D., University of Arkansas, Fayetteville</td>
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<td>Mohan, Seshadri ◊</td>
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<td>Associate Professor of Teacher Education</td>
<td>B.A., M.A., Ph.D., University of Missouri, Kansas City</td>
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<td>B.S., Virginia Polytechnic Institute and State University, M.A., Ph.D., University of Nebraska-Lincoln</td>
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<td>B.A., Ball State University, M.A., Arizona State University, Ph.D., New Mexico State University</td>
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<td>B.S., Maryville, MO, M.S., Illinois State University, Ph.D., University of Kansas Medical Center</td>
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<td>B.Sc., M.Sc., Orta Dogu Teknik University, M.Sc., Ph.D., Loughborough University</td>
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| Ortega, Raymond C.    | Assistant Professor                                       | M.S., University of Central Arkansas  
Ed.S., University of Arkansas at Fayetteville  
Ed.D., University of Memphis |
| Otters, Rosalie       | Associate Professor of Social Work                        | M.S.W., Washington University  
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| Pidugu, Srikanth B.   | Professor, Mechanical Engineering Technology               | B.S., Osmania University, India  
M.S., Indian Institute of Technology, India  
Ph.D., Old Dominion University |
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<td>Richeson, David T.</td>
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<td>Schafer, Patricia E.</td>
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<td>Rurup, Debra A.</td>
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<td>Sikies, Robert S.</td>
<td>Professor of Biology</td>
</tr>
<tr>
<td>Smith, A.J.</td>
<td>Professor of Art</td>
</tr>
<tr>
<td>Smith, Bruce D.</td>
<td>Professor of Special Education</td>
</tr>
<tr>
<td>Snyder, Janea</td>
<td>Senior Instructor of Health, Human Performance, and Sport</td>
</tr>
</tbody>
</table>

-S-
Scranton, Margaret E. ◊
Professor of Political Science
B.A., Randolph-Macon Women’s College
M.A., Ph.D., University of Pittsburgh

Sedivy-Benton, Amy ◊
Assistant Professor of Secondary Education
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M.S., E.D., Southern Illinois University
Ph.D., Loyola University

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Ph.D., Liverpool John Moores University

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M.A., Ph.D., University of Nebraska-Lincoln

Sherwin, Elisabeth D. ◊
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Ph.D., University of Arkansas, Fayetteville

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Stevenson, Jerry G. ◊
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A.B., M.S.W., Ph.D., University of Georgia

Stone, Warren S. ◊
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Streett, Rebecca A.
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M.S., University of Arkansas at Little Rock

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M.A., San Francisco State University
Ph.D., Stanford University

Talburt, John ◊
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M.S., Ph.D., University of Arkansas, Fayetteville

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M.S., Chinese Academy of Sciences
Ph.D., University of Iowa

Tang, Peiyi ◊
Professor of Computer Science
Diploma in Mathematics, Fudan University

Thombre, Avinash ◊
Associate Professor of Speech Communication
B.S., M.E.S. College, Bangalore, India
B.A., Indira Gandhi National Open University, India
M.S., Bangalore University, India
Ph.D., University of New Mexico

Thompson, Carol L. ◊
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Tramel, J. Michael
Chairperson, Department of Construction Management
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Thompson, Carol L. ◊
Professor of Speech Communication
B.A., M.A., Ph.D., Southern Illinois University
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Education</th>
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</thead>
</table>
| Tapp, Marilyn J.         | Instructor of Mathematics and Statistics | MEngr, East China Normal University  
Ph.D., University of Illinois |
| Tarasenko, Olga          | Associate Professor of Biology       | MD, Kyrgyz State Medical Academy  
Ph.D., Kyrgyz State Medical Academy |
| Taylor, Cynthia L.       | Associate Professor of Accounting    | B.S., M.A., University of Arkansas at Little Rock  
Ph.D., Oklahoma State University |
| Tebbetts, George P.      | Chairperson, Department of Engineering Technology/Associate Professor of Mechanical Engineering Technology | B.S., Texas Agricultural and Mechanical University  
M.S., University of New Haven |
| Terry, H. Andrew         | Professor of Finance                 | B.A., Hendrix College  
M.A., Ph.D., University of Michigan |
| Thambusamy, Ravi         | Assistant Professor of Business Information Systems | B.Eng., Anna University  
M.S., Oklahoma State University  
M.S., Ph.D., University of North Carolina at Greensboro |
| Thomas, Jan L.           | Professor of Philosophy              | B.A., University of Colorado, Boulder  
M.A., Ph.D., University of Arizona, Tucson |
| Thomas, Johanna M.       | Associate Professor of Social Work   | B.A., University of Akron  
M.S.W., Ph.D., Louisiana State University |
| Thomas, Shaun            | Associate Professor of Criminal Justice | B.A., University of Akron  
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| Underwood, Olimpia       | Instructor of Spanish                | B.A., Universidad Veracruzana, Xalapa, Veracruz, Mexico  
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<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Affiliation</th>
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</table>
| **Underwood, Michael** | Assistant Professor of Music | B.M., Lawrence University  
M.M., Bowling Green State University  
D.M.A., University of North Texas |

| Vander Putten, James J. | Associate Professor of Higher Education | B.S., University of Wisconsin – Stout  
M.S., Indiana University  
Ph.D., University of Michigan |
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| Varela, Otmar | Associate Professor of Management | B.S., Universidad Central de Venezuela  
MBA, Universidad Pontificia de Comillas  
M.S., Ph.D., Tulane University |

| Vaughn-Neely, Elizabeth | Associate Professor of Educational Leadership | B.A., Syracuse University  
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Ph.D., Oregon State University |

| Vinikas, Vincent A. | Professor of History | B.A., Pennsylvania State University  
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| Viswanathan, Tito | Professor of Chemistry | B.S., University of Delhi  
M.S., University of Houston  
Ph.D., Tulane University |

| Wall, Hong Li | Associate Professor of Biology | B.S., Xingjiang University, China  
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| Wang, Xiaoshen | Professor of Mathematics | B.S., M.S., Jilin University, Changchun, China  
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| Warrick, Michael R. | Professor of Art | B.S., Illinois State University  
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| Watson, Theresa A. | Senior Instructor of Mathematics | B.S., Millersville University  
M.S., Ohio University |

| Wayland, Jane P. | | |

| Wallace, Thomas S. | Advanced Instructor of Information Technology | B.A., M.A., University of Arkansas, Little Rock |

| Wang, Xiaoshen | Professor of Mathematics | B.S., M.S., Jilin University, Changchun, China  
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M.S., Ohio University |

| Wayland, Jane P. | | |

| Wiebelhaus-Brahm, Eric | Assistant Professor of Political Science | B.A., Marquette University  
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| Williams, Jay J. | BSW Field Coordinator | B.A., M.S.W., University of Arkansas at Little Rock |

| Williams, Joseph J. | Associate Professor of Rhetoric and Writing | B.A., Lehigh University  
M.A., West Chester University  
Ph.D., Syracuse University |

| Williams-Smith, Marjorie W. | Professor of Art | B.F.A., Howard University  
M.F.A., Pratt Institute |

| Wood, Betty Kay | Associate Professor of Teacher Education | B.S.E., University of Central Arkansas  
M.S.E., University of Arkansas at Little Rock  
Ph.D., Purdue University |
<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Stephen Harrow Smith</td>
<td>Dean of the College of Business</td>
<td>B.S., M.B.A., University of Southern Mississippi</td>
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<td></td>
<td></td>
<td>Ph.D., University of North Texas</td>
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<tr>
<td>Woodard, John M.</td>
<td>Senior Instructor of Construction Management</td>
<td>B.C.E., M.S.C.E., Georgia Institute of Technology</td>
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<tr>
<td>Weekley, David C.</td>
<td>Instructor of Mass Communication</td>
<td>B.A., University of Houston</td>
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<td></td>
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<td>M.Ed., University of Arkansas at Little Rock</td>
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<tr>
<td>Wen, Andy Y.</td>
<td>Associate Professor of Music</td>
<td>B.M., Ohio University</td>
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<td>Wichinsky, Lillian</td>
<td>Associate Professor of Social Work</td>
<td>B.A., University of Florida</td>
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<td>M.S.W., California State University</td>
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<td>Ph.D., Florida International University</td>
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<tr>
<td>Woolridge, Richard</td>
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<td>B.S., University of Texas at Arlington</td>
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<td>M.S., Ph.D., University of Alabama</td>
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<td>Wright, Andrew B.</td>
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<td>M.S., Massachusetts Institute of Technology</td>
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<td>Ph.D., Rensselaer Polytechnic Institute</td>
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<tr>
<td>Wu, Ningning</td>
<td>Professor of Information Science</td>
<td>B.S., M.S., University of Science and Technology of China</td>
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<td>Ph.D., George Mason University</td>
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<tr>
<td>Xie, Mengjun</td>
<td>Assistant Professor of Computer Science</td>
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<td>Xu, Xiaowei</td>
<td>Professor of Information Science</td>
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<td>B.S., Nankai University, China</td>
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<td>M.S., Shenyang Institute for Computing Technology, Chinese Academy of Sciences, China</td>
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<td>Ph.D., University of Munich, Germany</td>
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<tr>
<td>Ye, Cang</td>
<td>Professor of Systems Engineering</td>
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<td>Ph.D., University of Hong Kong</td>
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<td>Ye, Xiu</td>
<td>Professor of Mathematics</td>
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<td>B.S., Wuhan University, Wuhan, China</td>
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<td>M.S., Ph.D., University of Pittsburgh</td>
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<tr>
<td>Yoshigoe, Kenji</td>
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<td>B.S., University of South Florida</td>
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<td>Ph.D., University of South Florida</td>
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<tr>
<td>Yu, Shucheng</td>
<td>Assistant Professor of Computer Science</td>
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<td>B.S., Nanjing University of Posts &amp; Telecommunications</td>
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<td>M.S., Tsinghua University</td>
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<td>Ph.D., Worcester Polytechnic Institute</td>
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<tr>
<td>Yu, Xian</td>
<td>Assistant Professor of Statistics</td>
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<td>B.Eng., Beijing University of Technology</td>
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<td>M.S., University of Alaska Fairbanks</td>
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<td></td>
<td></td>
<td>Ph.D., University of Texas at Dallas</td>
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<tr>
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<tr>
<td>Zacher, Dale</td>
<td>Associate Professor of Mass Communication</td>
<td>B.A., University of North Dakota, M.S., Ph.D., Ohio University</td>
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<tr>
<td>Zeng, Lirong</td>
<td>Assistant Professor of Biology</td>
<td>B.S., Hunan Agricultural University, M.S., Zhongshan University, Ph.D., Ohio State University</td>
</tr>
<tr>
<td>Zhang, Jing</td>
<td>Associate Professor of Systems Engineering</td>
<td>B.S., MSEE, Southeast University, China, Ph.D., Swiss Federal Institute of Technology, Zurich</td>
</tr>
<tr>
<td>Zhang, Wenle</td>
<td>Associate Professor, Electronics and Computer Engineering Technology</td>
<td></td>
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<tr>
<td>Zhao, Wei</td>
<td>Professor of Chemistry</td>
<td>B.S., M.S., Ph.D., Peking University</td>
</tr>
</tbody>
</table>
Index of Faculty Emeriti

The following is an alphabetical listing of our faculty.

-A-

Fenton Adams, B.A., L.L.B., JD
Professor of Law, (1977-1993)

Luana S. Adams, B.S.N., M.S.N.
Associate Professor of Nursing, (1987-2006)

W. Steve Anderson, BA, MA, PhD
Professor of English, (-2010)

Marc Arnold, PhD
Associate Professor of Rhetoric and Writing, (1976-2002)

Lawrence H. Averill Jr., BA, JD, LLM
Charles C. Baum Distinguished Professor of Law, (1982-2001)

-B-

Dennis A. Baeyens, BS, MS, PhD
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Assistant Professor of Computer Science, (1974-2001)

Suzann W. Barr, B.A.,
Instructor of German, (1975-2004)

Suzann W. Barr, B.A.,
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M.A., University of Kansas

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Ralph M. Burns, B.A., MFA, Ph.D.,
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James F. Butler, BA, MBA, PhD
Professor of Economics, (1963-1996)

Jerry P. Butler, BA, MS, PhD
Professor of Speech Communication, (1970-1997)
<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Years</th>
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<tbody>
<tr>
<td><strong>Frances Cantwell, BA, BS</strong></td>
<td>Assistant Professor of Library Science and Assistant Librarian, (1958-1981)</td>
</tr>
<tr>
<td><strong>Richard P. Carr, Jr., BBA, MBA, MS, PhD</strong></td>
<td>Associate Professor of Marketing, (1980-1997)</td>
</tr>
<tr>
<td><strong>Roger Chisholm, BA, MS, PhD</strong></td>
<td>Professor of Economics and Finance, (1985-2001)</td>
</tr>
<tr>
<td><strong>Lawrence A. Coleman, BS, MS, PhD</strong></td>
<td>Professor of Physics, (1969-2004)</td>
</tr>
<tr>
<td><strong>NanJo Dubé Coleman, BS, MED, PhD</strong></td>
<td>Professor of Secondary Education, (1975-1995)</td>
</tr>
<tr>
<td><strong>Cassandra L. Cox, B.A., M.A., Ph.D.</strong></td>
<td>Associate Professor of Mathematics (1987-2014)</td>
</tr>
<tr>
<td><strong>Richard C. Crawford, BS, MBE, PhD</strong></td>
<td>Professor of Management, (1974-2010)</td>
</tr>
<tr>
<td><strong>Steven Crawshaw, BA, MS</strong></td>
<td>Advanced Instructor of Physics, (1977 to 2013)</td>
</tr>
<tr>
<td><strong>Huey D. Crisp, BS, MA, EdD</strong></td>
<td>Instructor in Rhetoric and Writing, (1980-2011)</td>
</tr>
<tr>
<td><strong>NanJo Dubé Coleman, BS, MED, PhD</strong></td>
<td>Professor of Secondary Education, (1975-1995)</td>
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<td><strong>Cassandra L. Cox, B.A., M.A., Ph.D.</strong></td>
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<td><strong>Marian C. Crawford, BS, MBE, PhD</strong></td>
<td>Professor of Management, (1974-2010)</td>
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<td><strong>Steven Crawshaw, BA, MS</strong></td>
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<td><strong>Huey D. Crisp, BS, MA, EdD</strong></td>
<td>Instructor in Rhetoric and Writing, (1980-2011)</td>
</tr>
<tr>
<td><strong>Robert C. Culpepper, BS, MBA, PhD</strong></td>
<td>Professor of Accounting, (1975-1997)</td>
</tr>
<tr>
<td><strong>-D-</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Jesse E. Dancer, BS, MS, PhD</strong></td>
<td>Professor of Audiology and Speech Pathology, (1978-2002)</td>
</tr>
<tr>
<td><strong>Priscilla N. Davis, BSE, MA, PhD</strong></td>
<td>Professor of Audiology and Speech Pathology, (1972-2003)</td>
</tr>
<tr>
<td><strong>-E-</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Ralph D. Eberly, B.A., Ph.D.</strong></td>
<td>Cooper Distinguished Professor of English, (1967-1985)</td>
</tr>
<tr>
<td><strong>Steven W. Edison, B.S., M.B.A., Ph.D.</strong></td>
<td>Professor in Marketing and Advertising (1998-2014)</td>
</tr>
<tr>
<td><strong>Victor E. Ellsworth, BME, MM, PhD</strong></td>
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<tr>
<td><strong>-F-</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Dale V. Ferguson, BS, MS, PhD</strong></td>
<td>Professor of Biology, (1970-2004)</td>
</tr>
<tr>
<td><strong>Jamie A. Foster, BSHE, MSHE, EdD</strong></td>
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<tr>
<td><strong>Shirley M. Freeman-Turner, BSE, MSE, EdD</strong></td>
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<tr>
<td><strong>Edward Jay Friedlander, BS, MA, EdD</strong></td>
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</tr>
<tr>
<td><strong>Richard Frothingham, BA, BD, PhD</strong></td>
<td>Professor of Philosophy and Religious Studies, (1962-1986)</td>
</tr>
<tr>
<td><strong>Melville Fuller, BS, MED, PhD</strong></td>
<td>Professor of Secondary Education, (1974-1994)</td>
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<td><strong>-G-</strong></td>
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<tr>
<td><strong>Jackie Garner, BS, MS, PhD</strong></td>
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<tr>
<td><strong>William C. Goolsby</strong></td>
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<tr>
<td>Name</td>
<td>Position</td>
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<tr>
<td>James E. Gauntt, Jr., BA, MBA, PhD</td>
<td>Professor of Mathematics</td>
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<tr>
<td>Elizabeth Byrd Gibbens, BA, MA, PhD</td>
<td>Associate Professor of Accounting</td>
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<tr>
<td>Charles W. Goldner, Jr., B.A., JD, LLM</td>
<td>Dean and Professor of Law</td>
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<tr>
<td>Susan D. Goldner, M.A., MLS</td>
<td>Professor of Law Librarianship</td>
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<td>Mary L. Good, BS, MS, PhD</td>
<td>Dean, Donaghey College of Engineering and Information Technology</td>
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<tr>
<td>Frank D. Hall, B.S., M.B.A., Ph.D.</td>
<td>Associate Professor of Management</td>
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<tr>
<td>Ralph Hammond, BA, MEd, PhD</td>
<td>Associate Professor of Psychology</td>
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<tr>
<td>Gerald T. Hanson, BS, MA, PhD</td>
<td>Professor of Geography</td>
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<tr>
<td>Richard H. Hanson, B.S., Ph.D.</td>
<td>Professor of Chemistry</td>
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<tr>
<td>Charles E. Hathaway, BS, PhD</td>
<td>Chancellor</td>
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<tr>
<td>Roger M. Hawk, BS, MS, PhD</td>
<td>Professor of Applied Science</td>
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<tr>
<td>Gary A. Heidt</td>
<td>Professor of Biology</td>
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<td>Anna L. Heatherly, BSE, MEd, EdD</td>
<td>Associate Professor of Elementary Education</td>
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<tr>
<td>Burton Henderson, BS, MEd</td>
<td>Associate Professor of Mechanical Engineering Technology</td>
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<tr>
<td>Professor of Finance, (1996-2008)</td>
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<td>Kenneth Ray Goosen, BS, MS, PhD</td>
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<td>Cheryl R. Grable, BS, MSE, EdD</td>
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<td>William E. Gran, BS, MS</td>
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<tr>
<td>Albert Grauer, BS, Phd</td>
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<td>John W. Gray, BA, MA, PhD</td>
<td>Professor of Speech Communication</td>
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<tr>
<td>David M. Guerra, BA, MS, PhD</td>
<td>Professor of Radio, Television and Film</td>
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<tr>
<td>Katherine L. Henslee, BSE, MEd, EdD</td>
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<tr>
<td>John Hill, BA, MSW</td>
<td>Associate Professor of Social Work</td>
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<td>John R. Hodges, BS, MS, PhD</td>
<td>Professor of Mathematics</td>
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<td>Mary Frances Hodges, MEd</td>
<td>Instructor of Rhetoric and Writing</td>
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<td>Professor of Art</td>
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<tr>
<td>Samuel Howell, BSE, ME, EdD</td>
<td>Assistant Professor of Education</td>
</tr>
<tr>
<td>Carl F. Hummel, Jr.</td>
<td>Associate Professor of Psychology</td>
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<tr>
<td>Name</td>
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<tr>
<td>Arlos Ferrel James, BSE, MFA, EdD</td>
<td>Professor of Learning Systems Technology</td>
</tr>
<tr>
<td>David R. Jauss, B.A., M.A., Ph.D.</td>
<td>Professor of English</td>
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<td>Steven F. Jennings, B.S., M.S., Ph.D., Exec. M.B.A.</td>
<td>Professor of Information Science</td>
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<td>Robert Jespersen, AB, AM, JD, LLM</td>
<td>Professor of Business Law</td>
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<tr>
<td>Shirley Jespersen, BA, MS, EdD</td>
<td>Associate Professor of Educational Leadership</td>
</tr>
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<td>Robert Johns, BA, MAT, PhD</td>
<td>Associate Professor of Secondary Education and History</td>
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<td>Alan M. Johnson, BA, MS, PhD</td>
<td>Professor of Mathematics and Statistics</td>
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<td>Cameron D. Jones, BA, MA, PhD</td>
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<tr>
<td>Philip L. Kehler, BS, MS, PhD</td>
<td>Professor of Earth Science</td>
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<td>J. Hope Keiser, BS, MA, PhD</td>
<td>Professor of Audiology and Speech Pathology</td>
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<td>E. Frank Kenney, BA, STB, MA, PhD</td>
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<td>Marilyn Keys, BA, MA</td>
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<td>Maurice G. Kleve, B.S., M.A., Ph.D.</td>
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<td>Roslyn Knutson, BA, MA, PhD</td>
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<td>Jimie Kusel, AB, MBA, PhD</td>
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<td>Gladys Ann Larowe, BSN, MSN</td>
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<td>Richard Lewis, BS, MS, PhD</td>
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<td>R. Burt Madden, BS, MS, PhD</td>
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<tr>
<td>Happy Mahfouz, BS, MSE</td>
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<td>Alan H. Marks</td>
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<td>Cleo B. Mattox, BSE, MBE, Ed.D.</td>
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<td>James C. Montague, BS, MA, PhD</td>
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<td>Erle Patrick Moore, B.A., M.A., Ph.D.</td>
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<td>Phyllis J. Moore, BA, MSE, PhD</td>
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<td>Ray Moore, BM, MA, EdD</td>
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<td>Malay K. Mazumder</td>
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<td>David McAlpine, B.A.E., M.A., Ed.D.</td>
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<td>Susan Mercer, BA, MSSW, DSW</td>
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<td>Cynthia D. Milazzo</td>
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<tr>
<td><strong>John C. Pickett</strong></td>
<td>Professor of Economics and Finance, (1986-2008)</td>
</tr>
<tr>
<td><strong>Donna G. Quimby, B.S., M.S.E., Ph.D.</strong></td>
<td>Chairperson, Department of Health, Human Performance &amp; Sport Management/Associate Professor of Health, Human Performance &amp; Sport Management (1975-1981, 1994-2014)</td>
</tr>
<tr>
<td><strong>Linda J. Rimer</strong></td>
<td>Professor of Nursing, (1974-2008)</td>
</tr>
<tr>
<td><strong>John D. Robson, BS, MS, PhD</strong></td>
<td>Professor of Sociology, (1975-1999)</td>
</tr>
<tr>
<td><strong>Aimar Andre Rollefson, BA, MA, PhD</strong></td>
<td>Professor of Physics, (1974-2005)</td>
</tr>
<tr>
<td><strong>Julian (Jud), Rouch, RLS, BA, MS, EdS</strong></td>
<td>Professor of Surveying and Land Information, (1985-2001)</td>
</tr>
<tr>
<td><strong>Conway T. Rucks, Jr., B.S., B.A., M.B.A., D.B.A.</strong></td>
<td>Professor of Marketing and Advertising (1975-2014)</td>
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<tr>
<td><strong>Keith B. Runion, BA, ME, EdD</strong></td>
<td>Associate Professor of Counselor Education, (1986-2006)</td>
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<tr>
<td><strong>Kathy Sanders, BS, MALS, MA</strong></td>
<td>Associate Professor of Library Science, (1969-2004)</td>
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<tr>
<td><strong>Luther Sanders, BS, MA, EdD</strong></td>
<td>Professor of Journalism, (1974-2000)</td>
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<tr>
<td><strong>Luciano A. Santa Cruz, BA, MSW, DSW</strong></td>
<td>Associate Professor of Social Work, (1978-2005)</td>
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<td><strong>Sally Y. Sedelow, BA, MA, PhD</strong></td>
<td>Professor of Computer and Information Science, (1985-1995)</td>
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<td><strong>Walter A. Sedelow, BA, MA, PhD</strong></td>
<td>Professor of Computer and Information Science, (1985-1995)</td>
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<td><strong>Peter Thomas Sherrill, BA, MA, PhD</strong></td>
<td>Professor of History, (1970-1998)</td>
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<td><strong>Ralph Shull, BS, MA, PhD</strong></td>
<td>Professor of Economics and Finance, (1980-2000)</td>
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<td><strong>Jean Sizemore, BA, MA, PhD</strong></td>
<td>Associate Professor of Art, (1986-2000)</td>
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<td><strong>Harold T. Smith, BA, MA, PhD</strong></td>
<td>Professor of History, (1969-1996)</td>
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<td><strong>Smith, Patricia B., B.S., M.A., Ed.D.</strong></td>
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<td><strong>Gisela Spieker, BA, MSW, PhD, (1971-1990)</strong></td>
<td>Professor of Social Work</td>
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<tr>
<td><strong>David S. Spillers, BSE, ME, EdD, (-2010)</strong></td>
<td>Professor of Educational Media</td>
</tr>
<tr>
<td><strong>Logan Scott Stafford, BS, JD (1981-2004)</strong></td>
<td>Professor of Law</td>
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<td><strong>Ali Uddin Shaikh, B.Sc., M.Sc., M.S., Ph.D.</strong></td>
<td>Professor of Chemistry (1980-2014)</td>
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<td><strong>Betty Stephens, NDR, MS, (1967-1988)</strong></td>
<td>Assistant Professor in Health, Physical Education</td>
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<td><strong>Howard Stephens, BS, MA, EdD, (1969-1995)</strong></td>
<td>Associate Professor of Teacher Education</td>
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<td><strong>A. Ann Straughn, BSN, MSN, (-2010)</strong></td>
<td>Associate Professor of Nursing</td>
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<tr>
<td><strong>Johnye E. Strickland, BA, MA, PhD, (1991-2001)</strong></td>
<td>Professor of English</td>
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<td><strong>Lana Strickland, D.B.S.N., M.N.Sc.</strong></td>
<td>Associate Professor of Nursing (1996-2014)</td>
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<tr>
<td><strong>Mary C. Sturgeon, BSE, MA, (1967-1987)</strong></td>
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<td>Carol D. Snelson</td>
<td>Professor of Rehabilitation Education, (1984-2012)</td>
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<tr>
<td>Neil E. Snortland, BA, MA, PhD</td>
<td>(~2010)  Professor of Political Science and Chairperson, Department of Political Science</td>
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<td>Nicholas J. Sobin, BA, MA, PhD</td>
<td>(1980-2000)  Professor of English</td>
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<tr>
<td>Thea S. Spatz, BA, MA, EdD</td>
<td>(1987-2005)  Professor of Health Sciences</td>
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<tr>
<td>Bill C. Tadlock, BS, MBA, DBA</td>
<td>(1967-1994)  Associate Professor of Marketing</td>
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<tr>
<td>Barbara B. Taegel, BSE, MA</td>
<td>(1960-1996)  Dean of Students/Assistant Professor of Leisure Science</td>
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<td>Myra G. Taff-Watson, BA, MA</td>
<td>(1982-2006)  Assistant Professor of Counseling, Adult, &amp; Rehabilitation Education</td>
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<td>John R. Talburt, BS, MS, PhD</td>
<td>(1984-1995)  Professor of Computer and Information Science</td>
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<tr>
<td>Tom Teeter, BSE, MLS, EdD</td>
<td>(1972-2002)  Professor of Information Technology</td>
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<tr>
<td>Mary Jean Thomas, BS, MS, PhD</td>
<td>(1977-1992)  Professor of Radio, Television, and Film</td>
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<td>Dennis P. Vannatta, B.S.E., M.A., Ph.D.</td>
<td>Professor of English, (1986-2012)</td>
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<tr>
<td>Martha Vroeman, BS, MS</td>
<td>(1974-1977)  Assistant Professor of Nursing</td>
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<tr>
<td>Allan Ward, BA, MA, PhD</td>
<td>(1973-2000)  Professor of Speech Communication</td>
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<td>Merritt N. Sugg, BS, PhD</td>
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<td>Bruce Swinburne, BA, MA, EdD</td>
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<td>Judyth A. Swingen, BS, MS, PhD</td>
<td>(2001-2011)  Professor of Accounting</td>
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<td>Patricia P. Thompson, BS, MEd, BSN, MSN</td>
<td>(1974-2000)  Associate Professor of Nursing</td>
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<td>Perry G. Thompson, BA, MA, PhD</td>
<td>(1977-2000)  Professor of Gerontology</td>
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<td>William H. Traylor, BSBA, MLIS</td>
<td>(1975 – 2006)  Associate Professor of Library Science</td>
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<td>Dorothy Truex, BA, MA, EdD</td>
<td>(1974-1983)  Professor of Education and Vice Chancellor for Student Affairs</td>
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<td>Gwendolyn Brown Twillie, BA, MS, PhD</td>
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<td>Kenneth Warrick, Master Sergeant</td>
<td>(1983-1987) Associate Professor of Educational Foundations</td>
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<td>Associate Professor of the Institute of Government (2003-2014)</td>
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<td>David Wood, AB, MA, PhD, (1965-2002)</td>
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<td>Erma Wood, BSE, MSE, EdD, (1972-1999)</td>
<td>Associate Professor of Management Information Systems</td>
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<td>Dominic T. Yang, BS, PhD</td>
<td>(1970-2005) Professor of Chemistry,</td>
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